ASHRAE Technical Session Summaries . . . . . Pg. 16

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Silver Shield To Be Launched Aug. 5 In Kansas City

KANSAS CITY, Mo. — U.S. Senator John Sparkman, Ala., chairman of the Senate Sub-Committee on Housing, will be the principal speaker at the launching Aug. 5 by the Greater Kansas City, Missouri Indoor Comfort Bureau, of the 14th Silver Shield Indoor Comfort Bureau at a banquet in the Muehlebach hotel here.

Former President Harry Truman and Mayor H. Roe Bartle of Kansas City have also given tentative acceptance of an invitation to attend the banquet, according to those in charge. It is forecast that nearly 900 will be present to participate in the licensing of the new bureau at the Saturday night affair.

Membership in the Kansas City Bureau as it starts out will be comprised of 75 dealers and contractors, 15 wholesalers, and the Kansas City Power & Light Co. and the Gas Service Co. President of the bureau is Clem Alexander, Johnson Furnace Co.

Part of the program will consist of the awarding of certificates to more than 100 "students" who graduated from the Technical Training Course.

Tickets for the banquet may be obtained from Ralph A. Nicholas, executive secretary, Sheet Metal & Air Conditioning Contractors Assn., 304 Merchandise Mart building, 2201 Grand, Kansas City 8, Mo.

New G-E Section For Central Air Conditioners

TYLER, Texas — The formation of a new General Electric product section, the Central Air Conditioner Section, comprised of G-E's Tyler, Texas, central air conditioner plant and its Trenton, N. J., furnace plant, was announced recently.

McCullough

Heading up the new section is W. J. McCullough, formerly manager of finance for G-E's Air

(Continued on Page 4, Col. 5)

American-Standard Bows 18,000 rpm Centrifugal Unit

DETROIT—Distinguished by some marked innovations in design, made possible by a unique drive arrangement, a new hermetic centrifugal refrigeration machine and liquid chiller assembly called the "Packaged Tonrac" has been introduced by the American-Standard Industrial Div. here.

With power supplied from a separate motor - generator - exciter power unit which converts 60-cycle line current to 300-cycle current for the Tonrac motor, the centrifugal machine is driven by this motor operating at 18,000 rpm nominal speed on 480 v., 3-phase, 300-cycle current from the power unit.

This high-speed drive was a major factor in making possible design innovations which have led to substantial reductions in size and weight. A 105-ton Tonrac machine completely assembled will pass through a standard 36-in. doorway, and American - Standard officials

(Continued on Page 25, Col. 1)

Report on Progress for ARI Show

Over 60% of Exhibition Space Already Reserved

WASHINGTON, D. C. — Sale of space for the 12th Exposition of the Air Conditioning, Heating and Refrigeration Industry to be held Feb. 12-15 at The Great Western Exhibit Center, Los Angeles, and plans for the special technical and management programs to be held in conjunction with the meeting, are progressing satisfactorily and on schedule, reports H. T. "Hy" Jarvis, president, Recold Corp., and chairman of the Exposition Committee.

"Possibly because this is the first Exposition ever held in the West, it seems to me that enthusiasm for the show is reminiscent of the early shows held in our industry, when everyone of importance attended either to display products or see the products displayed in the "showcase" of the industry—the ARI Exposition," Jarvis commented.

Another factor favoring the Show, it was pointed out, is that for the first time in many years, the 12th Exposition will be the only major industry show to be held during the calendar year 1962. George Mills, director of the show with headquarters at the ARI offices here, stated that while over 60% per cent of the space in the Great Western Exhibit Center had been sold by June 1, there were still many choice spots left in the 67,000 sq ft available in the present, permanent buildings in the Exhibit Center.

Hours for the show will be Monday, Feb. 12, 2 p.m. to 10 p.m.; Tuesday, Feb. 13, 10 a.m. to 6 p.m.; Wednesday, Feb. 14, 10 a.m. to 6 p.m.; and Thursday, Feb. 15, 10 a.m. to 4 p.m.

Organizations which will hold

(Continued on Back Page, Col. 1)

Weather Outlook for 30-Day Period

WASHINGTON, D. C.—Wide variations from normal temperatures—both above and below—are predicted for various parts of the country in the 30-day period through mid-August, according to the U. S. Weather Bureau 30-day forecast.

While "below normal" temperatures are predicted for much of the central part of the country and parts of the South, "above normal" readings are expected along the upper Atlantic Seaboard (including the New York, Philadelphia, and Boston metropolitan areas), parts of the Southeast, and a good part of the Far West and Southwest, including all the California coastal area.

"Normal" temperatures for this period of the year are forecast for the Middle Atlantic area, part of the Great Lakes region, and the other parts of the South.

Home Building Up for 2nd Consecutive Month

WASHINGTON, D. C. — Reporting that home building activity increased in June for the second consecutive month, the Census Bureau said construction began on private new homes was at a seasonally adjusted annual rate of 1,374,000 units.

This was 6% higher than the revised rate of 1,295,000 units in May and 7% above the rate in June of last year. The June advance put the annual rate for

(Continued on Page 4, Col. 5)

So. Calif. Hails Joint Training

Contractor Group Hears Of Program's Benefits

LOS ANGELES—Cooperative effort of management and labor in providing journeymen training has enabled the Southern California refrigeration and air conditioning industry to build up one of the greatest businesses of any in the nation.

This was the consensus of opinions expressed by a panel of speakers at the June monthly membership meeting of the Southern California Chapter of RACCA.

As the featured part of the meeting's program, the panel outlined the past, present, and future of the joint journeymen and apprentice training effort which is conducted in the greater Los Angeles and Orange County areas under a joint labor agreement between RACCA and Refrigeration Fitters, branch local union No. 250.

Among the highlights brought out by the speakers was that the training program, since its inception in 1958, has:

1. Brought stabilization to the industry's pay scales in Southern California;
2. Helped to equip men with sufficient background information to get the job done both in construction and service work;
3. Enrolled and continues to

(Continued on Back Page, Col. 4)

NLRB Rules Against United Association Locals In 3 Secondary Boycott Cases

WASHINGTON, D. C.—Rulings were made recently against United Association locals in New York, Arizona, and Washington in National Labor Relations Board cases involving secondary boycotts.

The board issued a cease-and-desist order against Plumbers Union of Nassau County, Local 457, Long Island, N. Y. A complaint had been filed against the union by Jerry Bady, doing business as Bomat Plumbing & Heating. This case involved a dispute between the union and Bady over the employment of non-union plumbers.

In another case, NLRB Trial Examiner Howard Myers recommended that the NLRB issue a cease-and-desist order against Local 469, Yuma, Ariz. Charges were filed by the Independent Contractors Association.

In a third case, the NLRB ruled that a work stoppage by Local 598, Kennewick, Wash., and Local 44, Spokane, at a mis-

(Continued on Page 27, Col. 1)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Steven Isn't Even, But Give Him Credit for Trying

Well, whaddaya know! In the midst of all the pro-and-con furor stirred up by our editorial suggesting a sales academy, an air conditioning salesman called on us!

His name is Steven White, and he sells Mark IV auto air conditioners. Good salesman, too. His firm operates sales-and-service facilities at 7025 West Vernor in Detroit, and at 360 South Woodward in Birmingham, Michigan.

So far this year his sales are running 40% ahead of 1960! This despite the fact that traditionally cool Michigan had an exceptionally cold May and June. Snow actually fell on Detroit at midday, June 27.

Mr. White specializes in fleet sales. Unfortunately for the purpose of his call, the NEWS does not own and operate a fleet of cars for its salesmen.

Nor does "Dope" even drive to work any more. But we sure appreciated his visit. It was a pleasure to watch a good salesman work.

John Mitchell should be proud of Steven White.

You're the Boss

Touring editors of the NEWS — the likes of Phil Redeker, Frank Versagi, George Hanning, and Dale Mericle—continue to bring back complaints that "Dope" has become too serious lately.

"What's with the jokes, quips, anecdotes, and all-around good humor?" subscribers ask these

(Continued on Page 8, Col. 1)

Vilter Opens New Office In Cleveland, Names Brenton as Manager

MILWAUKEE — The Vilter Mfg. Corp. has announced the further expansion of its sales force with the opening of a new office in Cleveland, and the appointment of George E. Brenton as its reginoal manager.

From this office, he will direct the sale of Vilter refrigeration and air conditioning equipment throughout the northern half of Ohio and easttern Michigan. The activities of the new office will combine with the efforts of Vilter distributors to give the company greater representation in these important areas, it was stated.

Brenton had previously been regional manager of Vilter's Houston, Texas, office.

National BHC Meeting Set for Dec. 18-19

NEW YORK CITY — Sixth annual meeting of the national Better Heating-Cooling Council will be held Dec. 18-19 at the Hotel Delmonico here, it was announced recently.

Reports from the council's Residential Div., Commercial & Industrial Div., and local council department will cover 1961 activities and plans for 1962.

Delco Recalls 68

DAYTON — Delco Products Div., General Motors Corp., recently recalled 68 laid-off workers, boosting the number recalled since May 19 to 319. The company said the increase is the result of general business improvement in all the division's lines.

O'Shaugnessy Named To Torrington Post

TORRINGTON, Conn.—Kenneth E. O'Shaughnessy has been appointed sales manager of the Air-Moving Divs. of The Torrington Mfg. Co.

O'Shaughnessy

With L. C. Lindstrom, also sales manager, O'Shaughnessy will supervise sales and field services for both the company's Connecticut and Indiana plants.

O'Shaughnessy has for the last three years been sales representative in Indiana. David R. Gilda, formerly senior applications engineer in the company's Air Impeller Engineering Laboratory, has been appointed to replace O'Shaughnessy.

Conditioner Sales Up In Florida, Down Slightly In Kansas—Utilities

DETROIT—May sales of air conditioners were up substantially from a year earlier in the territory served by Florida Power & Light Co., Miami, but they were down somewhat in the area of Kansas Gas & Electric Co., Wichita, according to figures compiled by the utilities.

Reporting that first-month (May) sales in the four-month Home Comfort Cooling Campaign showed a 30% increase over the same period last year, Florida Power & Light said air conditioner volume reached 24% of campaign expectations. The drive is also promoting exhaust and portable fans.

May air conditioner sales totaled 4,732, compared with 3,699 in the same month of 1960. For the first five months of 1961, sales rose to 20,696 from 15,003 in the corresponding period of last year.

The FPL report shows unit sales to retail dealers as reported by state wholesalers, and also sales by department and chain stores and some retailers who purchase their merchandise from sources other than state wholesalers.

Dealers reporting to Kansas Gas & Electric Co. sold 542 room air conditioners in May, down slightly from the 566 sold a year earlier. However, their sales for the first five months of 1961 were up 13.4% from the same period of last year, totaling 1,173 against 1,034.

The retailers' sales of central air conditioners also were down in May but up for the January-May period. May sales aggregated 84 units, compared with 91 in May, 1960. This brought sales for the first five months of 1961 to 251, against 184 in last year's like period, a gain of 36.4%.

WASHINGTON POWER AREA

Dealer News, published by The Washington Water Power Co., Spokane, reported a rise in air conditioner sales in an item headed "Distributors Enthusiastic About Air Conditioning Campaign."

An inquiring reporter checking on air conditioning sales got answers like these: "This looks like the biggest yet." "My warehouse is almost empty already." "Buyers are going for the bigger, deluxe models to such an extent that we were amazed."

The report said some of the responses "included expressions of surprise that volume was so good considering the cold, late spring. Most appliance men conclude that the air conditioner is finally catching on and the three seasons of Inland Empire Electrical League promotion have had much to do with this success story."

"The 1961 air conditioning campaign has now hit its full stride. Newspaper ads are appearing every two or three days in the dailies and in each issue of the weeklies."

Hugh Calahan Dies

CINCINNATI—The Williamson Co. here reported the recent death of Hugh Calahan, who passed away at his home in Ft. Thomas, Ky., at the age of 58.

Calahan was vice president in charge of cooling research, and had been connected with Williamson for 25 years.

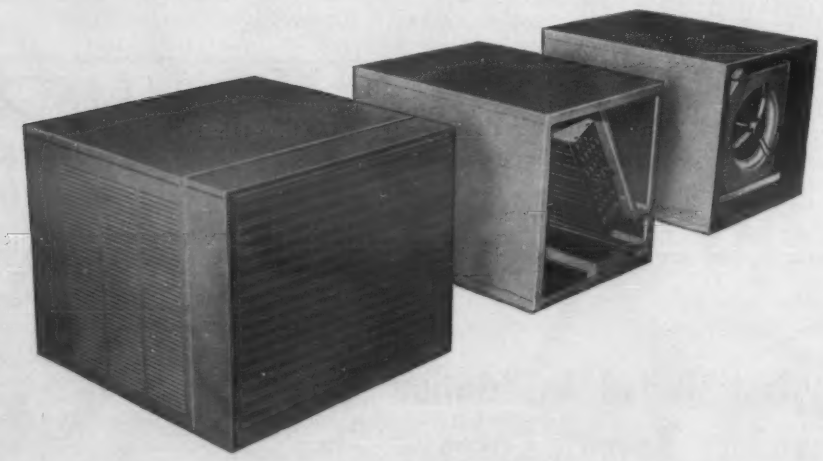
AGA Names J. F. Ray

GLENDALE, Calif. — J. F. (Jack) Ray, vice president of General Controls Co., has been named a member of the board of directors of the American Gas Association.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

PERFECTION IN FLEXIBILITY

Perfection Heat Pumps are *true* heat pumps — not reverse cycle air conditioners. Each inside coil has an extra row of oversize tubes to provide full capacity on the heating cycle. Perfection Tri-Pak Remote Heat Pumps (like the one shown) fit any installation requirement. Indoor coils and air handlers can be combined to provide any air travel required — vertical or horizontal, up or down, right-to-left or left-to-right. Saves time and cost in any installation. Easy to handle and service. And, Perfection Remote and Packaged Air Conditioners give you the same kind of flexibility. Both heat pumps and air conditioners are available in 2, 3, 4 and 5-Ton capacities to give you a model for any job. Complete selling flexibility? You bet! **PERFECTIONISTS** are a select group of distributors and dealers. Want complete details? Write Perfection Division, Hupp Corporation, 1135 Ivanhoe Road, Cleveland 10, Ohio.



PERFECTION

Fedders Third Quarter Sales, Earnings Top Same 1960 Period

MASPETH, N. Y.—Sales and earnings of Fedders Corp. for the three months ended May 31, third quarter of the fiscal year, were above those for the corresponding period of fiscal 1960, according to Salvatore Giordano, president, in his report to stockholders.

Net sales for the quarter totaled $17,914,074, compared to $15,422,032 in the like quarter of 1960. Net income rose to $1,056,965 from $987,427.

For the nine months ended May 31, net sales amounted to $44,878,834, compared with $51,401,248 in the corresponding year-ago period, while net income was $2,549,244, against $3,368,478 (excluding non-recurring net incime of $106,650 from the sales of certain property).

("Sales and earnings for the nine months of fiscal 1960 reflect the extremely abnormal situation which prevailed in the first quarter of that year due to exceptionally heavy orders for earlier-than-usual delivery of room units in anticipation of newly-established excise tax regulations," it was pointed out.)

Regarding the room air conditioning field, Giordano said that based on currently available information, Fedders again seems to have increased its share of the total market. Sales of the company's residential and commercial heating and cooling equipment also were above those of a year ago, he said.

EASA Appoints August A. Baechle

ST. LOUIS — August A. Baechle has been appointed executive vice president of the Electrical Apparatus Service Association, Inc., it has been announced by George Larsen, international president.

Baechle, who has been acting executive vice president of the international trade association since May 2, joined EASA's St. Louis headquarters as a staff engineer Sept. 1.

EASA members are independently-owned companies engaged in the repair, rewinding, and sales of electric motors, generators, transformers, etc.

O'Rourke Promoted to Furnas Sales Manager

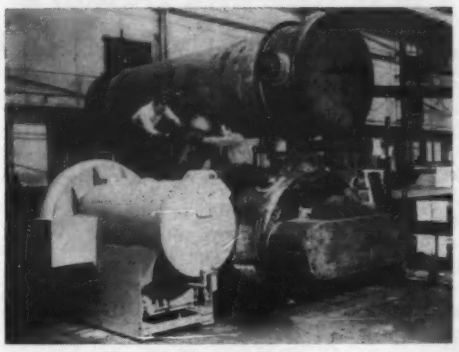
BATAVIA, Ill.—Furnas Electric Co. here, completing another step in the reorganization of its sales department, has promoted James M. O'Rourke to sales manager.

J. M. O'Rourke

O'Rourke, formerly manager of original equipment marketing, succeeds W. F. Lisman, now a vice president.

In his new position, O'Rourke will be responsible for the company's entire sales program and will be assisted by four regional sales managers.

For O'Hare International Airport



WORKMEN at the Carrier Air Conditioning Co. plant in Syracuse, N. Y. check the alignment of huge hermetic centrifugal refrigerating machine before the unit is painted and shipped to Chicago for installation at O'Hare International Airport. The machine, which weighs more than 30 tons and can chill 4,000 gals of water per minute, is one of three identical units with a combined cooling capacity of 6,000 tons which will provide chilled water for use in air conditioning the airport terminal building.

Knox & Associates To Represent Kerotest In South

PITTSBURGH—The appointment of W. B. Knox & Associates as manufacturer's representative for Kerotest Mfg. Co. has been announced.

In addition to the entire state of George, the agency will also service Alabama, Florida, South Carolina, and most of Tennessee with a line of brass refrigeration and air conditioning valves, fittings, and accessories.

Blower Operation Is Objective

Direct Conversion of Gas Heat Into Electricity Closer to Practical Use

NEW YORK CITY — Direct conversion of gas heat into electricity is moving a step closer to practical use in a research program undertaken jointly by the American Gas Association and General Dynamics Corp.'s General Atomic Div., the AGA announced.

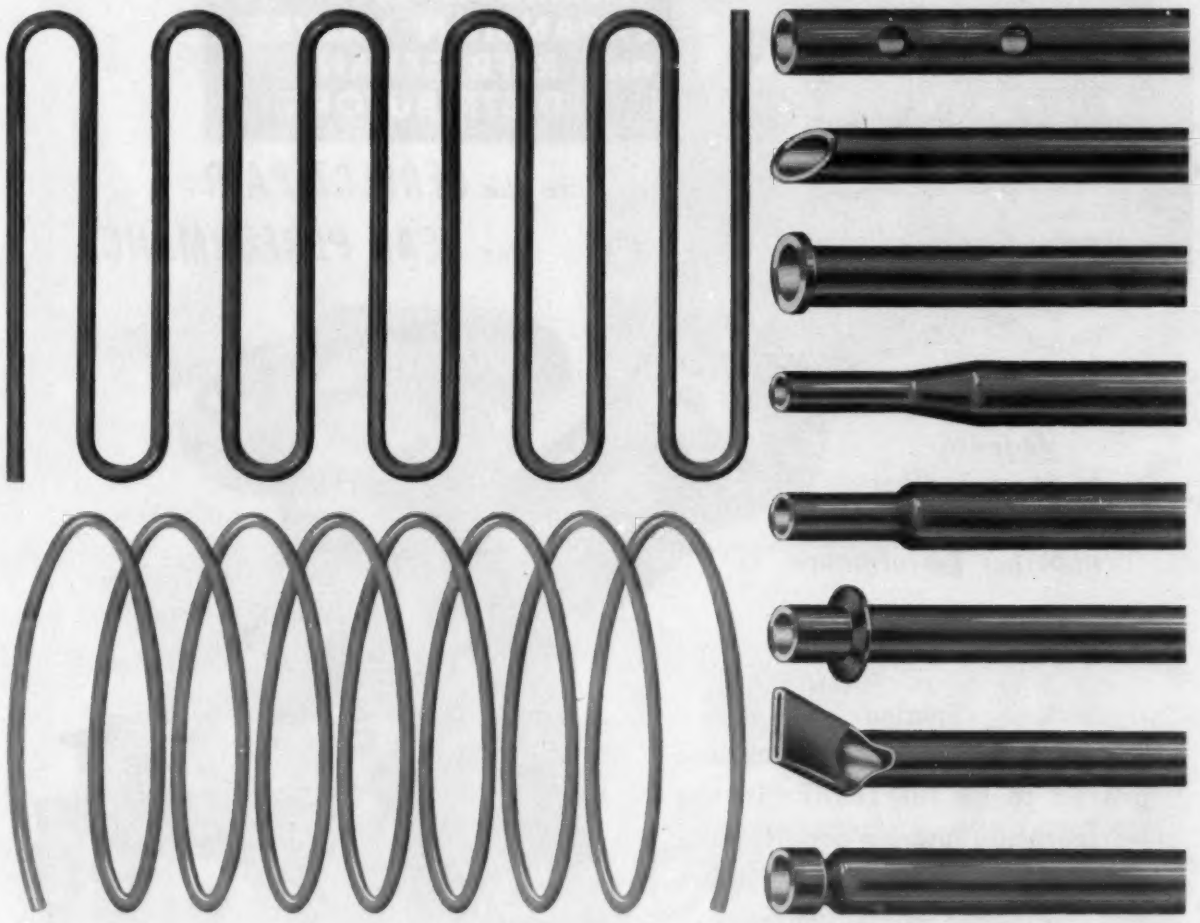
The aim of the project is to develop a small, low-cost thermoelectric module which could be used to convert part of the heat from a gas flame directly into small amounts of auxiliary electric power.

Such power could be used to supply energy necessary to operate a blower on a gas furnace. It might also be used to operate controls, fans, pumps, lights, and blowers on other gas appliances.

T. L. Robey, director of research for AGA, said a major objective of the research is to develop a compact, durable, and lightweight low-cost device which is adaptable to multiple production techniques.

Dr. Frederic de Hoffman, senior vice president of General Dynamics and president of General Atomic Div., announced that the project is already under way at General Atomic's John Jay Hopkins Laboratory, San Diego, Calif. General Atomic has been active in direct conversion projects since 1957.

TURN TO ROCHESTER STEEL TUBING . . .



your #1 pipeline to RELIABILITY You'll get refrigeration tubing that's made to work the way you want it to work for as long as you specify. That's the very essence of Rochester Reliability . . . and it means a lot to you. Quality Steel Tubing with mechanical strength far beyond normal stresses. The cleanest tubing you can buy. Forming facilities that assure flat-as-a-pancake serpentines. Complete end processing facilities. Coiling, up to 3,000 feet, that readily adapts to modern production lines. And you get this with schedule-meeting delivery service. Just write or wire Steel Tubing Sales Manager, Rochester Products Division.

GM

Rochester Reflects Reliability

GENERAL MOTORS

STEEL TUBING BY ROCHESTER PRODUCTS

ROCHESTER PRODUCTS DIVISION OF GENERAL MOTORS, ROCHESTER, NEW YORK

For Week Ended July 8

Dallas-Ft. Worth Unitary Conditioner Sales Continue at Reasonably Good Pace

Unitary air conditioner sales (other than room units) in the week ended July 8 in the Dallas-Ft. Worth area continued at a reasonably good pace, it was indicated in reports made by air conditioning dealer-contractors.

The total of 76 central residential air conditioning units reported sold represented a fairly substantial decline from the numbers sold in the two preceding weeks (which were among the top weekly totals for the year) but still was a respectable total. The 23 unitary jobs for commercial applications were close to the best weekly figures for the year.

This resume of sales in the Dallas-Ft. Worth area was made possible through figures submitted by Dallas Power & Light Co.; Texas Electric Service Co., Ft. Worth Div.; and Lone Star Gas Co., Dallas and Ft. Worth Divisions of Distribution.

Residential

Week (Ends)	No. Jobs	Total Tons
July 8	76	268

Commercial

Week (Ends)	No. Jobs	Total Tons
July 8	23	274

Flexible Tubing Outlet

GUILFORD, Conn. — Flexible Tubing Corp. has named Snook & Aderton, Inc., Lubbock, Texas, to handle its "Thermaflex" line.

Welbilt Names 3 Representatives

FARMINGDALE, N. J. — John E. Craig, general sales manager of Welbilt Air Conditioning & Heating Corp., has announced the appointment of three sales representatives.

Midwest Manufacturers Representatives, Inc., Omaha, Neb., owned by H. Lange and T. Donnelly, will service Nebraska and Iowa.

Also named sales representative was Herman Goldstein of Philadelphia. Expanded service in the mid-Atlantic area that includes southern New Jersey, eastern Pennsylvania plus eastern Maryland and Delaware is promised by the Goldstein organization.

Rufus Walker & Associates, Newtonville, Mass., will cover Maine, New Hampshire, Vermont, Massachusetts, and Rhode Island.

Florida Elementary School To Be Cooled With 80-Ton Packaged Water Chiller

BRADENTON, Fla.—A Westinghouse packaged water chilling unit has been installed at the Palma Sola school here, one of the first elementary schools in the state to be air conditioned, it was reported by Westinghouse Electric Corp.

"The installation of the 80-ton capacity chiller (Type PKB 2150) will mark the beginning of a major move by Florida school boards to air condition elementary schools throughout the state," the company said.

"Chilled water for cooling only will be supplied by the water chiller; a hot water boiler will furnish the necessary hot water for heating.

"The Palma Sola Elementary school has 21 classrooms, administrative suite, library, auditorium, and cafeteria. The water chilling unit was recommended by Roy E. Parker of Gulf Refrigeration, Inc., after a detailed analysis showed the unit's installation could be accomplished at little additional cost."

Gulf Refrigeration, the Westinghouse air conditioning equipment distributor in Bradenton, is supplying and installing the equipment. The architect was Edward Dean Wyke of Bradenton, and the engineers, Case Engr. & Assoc., Sarasota, Fla.

1961 NWAHACA Directory Publication Announced

CLEVELAND — The 1961 directory of the National Warm Air Heating & Air Conditioning Assn. has been published, the group announced.

"It includes the names, companies, and addresses of approximately 175 leaders of the heating and cooling industry who are providing their time, effort, and counsel to build the industry and its people," the announcement said. "These men include the association's officers, trustees, council and committee members, and staff."

Housing Starts--

(Continued from Page 1, Col. 4)

housing starts above 1,300,000 for the first time this year.

The figure for last month was the highest since February, 1960, when the rate was 1,383,000 units. June was the fifth month this year in which housing starts were higher than those of the preceding month. The only decrease was in April.

The bureau pointed out that housing starts usually decline somewhat from May to June. Government and private analysts believe the 1961 total will be around the 1,300,000 level.

A total of 136,900 farm and non-farm homes were started in June. This compares with 130,600 started in May and 128,200 a year ago.

New G-E Section--

(Continued from Page 1, Col. 2)

Conditioning Dept. in Louisville, Ky.

As general manager of the new product section, McCullough will have responsibility for both the Tyler and Trenton operations, and report directly to C. W. Moeller, general manager of G-E's Air Conditioning Dept.

In announcing McCullough's appointment, Moeller pointed out that this organizational change was made in recognition of the growth of General Electric central air conditioner sales in the last few years.

Moeller also observed that virtually everyone connected with the industry is optimistic of increased air conditioning sales as a whole in the next few years, and the change to section status for G-E central air conditioners was made not only to keep abreast of the predicted rising sales curve, but to allow General Electric to obtain an even larger share of the market.

SPORLAN THERMOSTATIC EXPANSION VALVES and REFRIGERANT DISTRIBUTORS

are the PERFECT PAIR *for* PEAK PERFORMANCE

. . . they're designed to fit each other for smoother performance

Sporlan Thermostatic Expansion Valves have proved to be the leader in the refrigeration and air conditioning field . . . and Sporlan alone offers you the tremendous advantages of the distributor with the Versatile Interchangeable Nozzle. It too has been the leader for many years.

No wonder then, that together they make the perfect pair for any installation.

Available in any combination of circuits and capacities, in flare, solder or flange connections.

For complete information see your Sporlan Wholesaler or write for Bulletins 10-10 and 20-10 today!

SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE ST. LOUIS 17, MISSOURI
EXPORT DEPT. 85 BROAD ST., NEW YORK 4, N. Y.

FTC Revises Rules To Speed Handling Of Deception and Monopoly Cases

WASHINGTON, D. C. — To speed its prosecution of cases, the Federal Trade Commission announced "extensive and far-reaching changes in its rules governing the trial and disposition of complaints against deception and monopoly in the marketplace."

The revised rules of practice replace those in effect since 1955.

The principal purpose of the revisions is to reduce delay in the handling of casework, not only by curbing dilatory tactics of respondents to FTC actions but by prohibiting overly deliberate prosecution and hearing of cases by FTC's own staff, it was explained.

Paul Rand Dixon, FTC chairman, hailed the new rules as a major advance in the commission's drive against delay in its adjudicatory proceedings.

Seek Relief for Victims Before Its Too Late

"We have good reason to hope that our revised rules will help the commission to shake itself loose from a lifelong incapacity to act soon enough," said Chairman Dixon. "By requiring litigants to present the issues of a case to the commission in the fastest reasonable time, we may be able to bring relief to victims of illegal actions while they are still in business."

Principal Changes

Among the principal changes are these:

- Any negotiations looking to settlement of a case by consent order will be conducted prior to the issuance of an FTC complaint. These negotiations will be supervised by the commission's new Office of Consent Orders, instead of as at present by hearing examiners.

  If within 30 days after a case has been referred to the Office of Consent Orders, the negotiations fail to produce a proper agreement to cease and desist from the complained of practice, the commission then will issue its formal complaint, and the case will be fully litigated. The consent order procedure will not be available to any respondent once a complaint is issued.

- With minor exceptions, any appeal from a hearing examiner's rulings during the trial of a case would require permission of the commission, and the need for an immediate decision must be demonstrated;

- To prevent meritless review of hearing examiners' initial decisions, a respondent henceforth must satisfy the commission that substantial matters are involved before it would hear the case.

  This rule provides, however, that no petition for review will be denied if two members of the five-man commission believe it should be granted. In deciding whether to hear the case, the commission will consider the entire record. The purpose of this rule is to stop appeals whose only purpose is to delay a final decision and waste the Commission's time.

- A new rule requires that the hearing of cases "shall proceed with all reasonable expedition." Unless the commission otherwise orders, all hearings will be held at one place and will continue without suspension until they are finished. (This will not bar overnight, weekend, or holiday recesses, or other brief intervals of the sort normally involved in judicial proceedings.)

- The rules also provide for pre-hearing conferences at which the hearing examiner may direct counsel for either side to make use of the "principles of discovery" whereby both counsel would be required, among other things, to disclose the names of witnesses or furnish for inspection or copying any non-privileged documents or other physical exhibits intended for use in the case.

Full text of the new rules may be obtained from the Publications Section, Federal Trade Commission, Washington 25, D. C.

Lewin-Mathes Appoints Robert Leonard Chicago District Manager

ST. LOUIS—Robert Leonard has been appointed district manager at Chicago for the Lewin-Mathes Co., a division of the Cerro Co., according to Rodrick J. Lewin, vice president, sales.

Leonard's brother, Frank, is manager of Lewin-Mathes' Milwaukee office and their father, Pat (Frank, Sr.) has been in sales with the company for years and is currently in purchasing.

In his new work, Robert Leonard succeeds Robert Cook, who moves up to regional manager. Leonard's territory covers northern Illinois and Indiana including Chicago, Kankakee, Peoria, Rockford, and Aurora, Ill.; South Bend, Gary, Hammond, Elkhart, and Ft. Wayne, Ind.

It was also announced that John A. Feeler has been appointed sales engineer for Lewin-Mathes in the St. Louis territory, which includes Illinois, Indiana, and the eastern half of Missouri.

Tuthill Buys Ossian

CHICAGO—Tuthill Pump Co. has purchased the Ossian Engineering Co., Inc., Baer Field, Ft. Wayne, Ind., J. G. Tuthill, president, has announced.

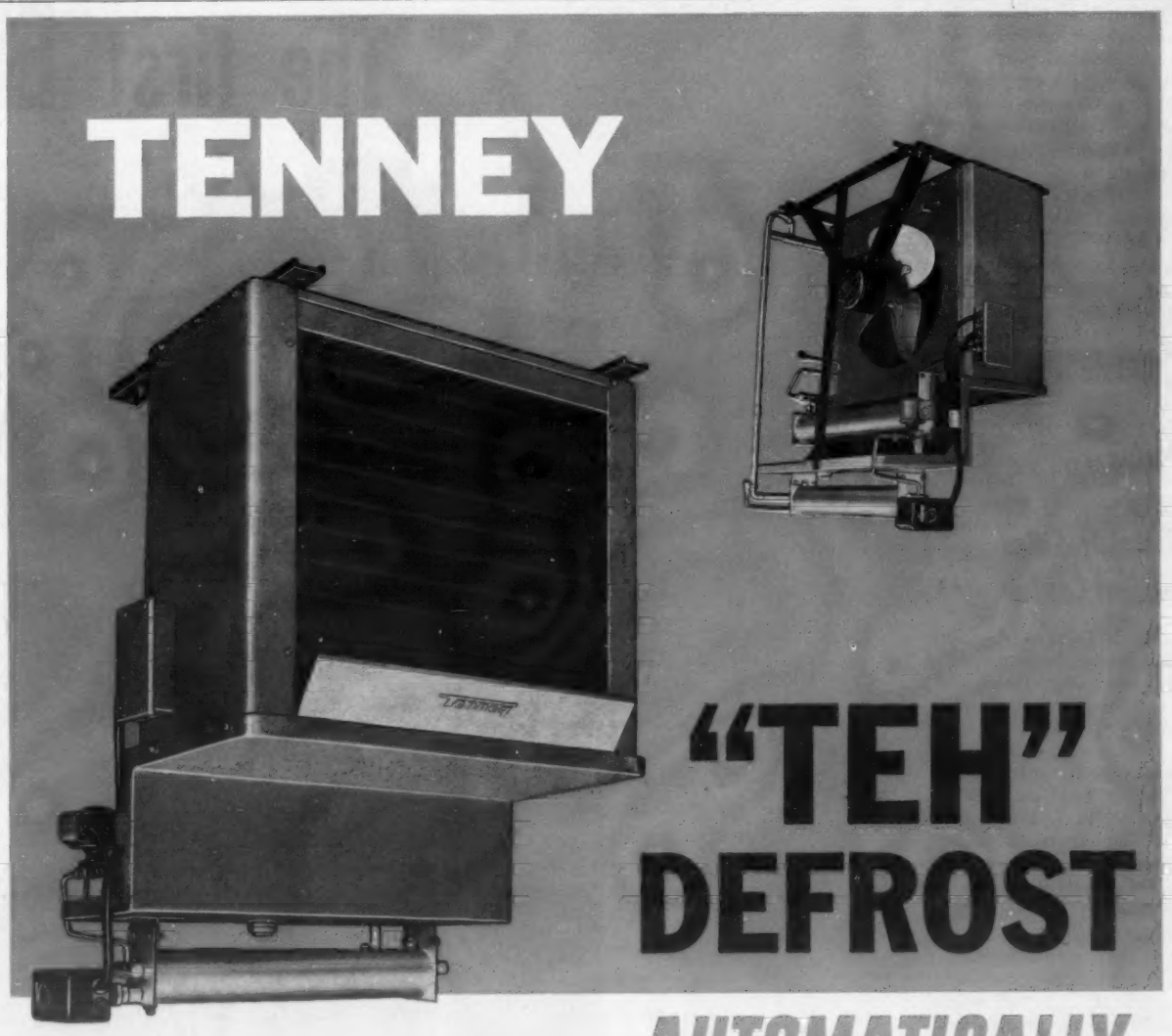
Ossian's line of hand and electric gasoline pumps will continue to be produced in the present facilities at Ft. Wayne, it was pointed out.

Chicago Consulting Engineers To Aid Inspection Bureaus

CHICAGO — The Chicago Association of Consulting Engineers has established a committee to assist the public inspection bureaus of local communities having to do with design and installation of plumbing, heating, ventilating, electrical, and structural work.

The committee is prepared to assist with technical advice in these five fields:

(1) Revisions and modernization; (2) assistance in writing of building code revisions; (3) engineering evaluation for compliance with building codes in force; (4) aid in determining the extent of violation of existing local building codes; (5) public service to law enforcing bodies.



AUTOMATICALLY
SEEKS OUT
ALL FROST!

Tenney's advanced engineering capabilities have produced another refrigeration advance: the TEH Defrostolator that combines the simplicity of electric defrosting with the frost removal efficiency of hot gas.

The TEH is **completely independent** of the condensing unit — it produces hot gas electrically and circulates it by means of a simple cycle that naturally seeks the coldest spot, thus automatically distributing the heat as needed during the defrost process. And the hot gas is produced by the same refrigerant used in normal refrigeration.

No physical relationship exists between compressor and defrost mechanism so there is no restriction on location of condensing unit.

To sum up: electric hot-gas defrost, easy installation, pressure controlled defrost, defrost independent of compressor, completely self-contained defrosting mechanism. For complete details, write today!

Refrigeration, Heating & Air Conditioning Products Division

Tenney ENGINEERING, INC.

1090 SPRINGFIELD ROAD • UNION, NEW JERSEY

Plastics Conference Set for Oct. 25 In Louisville, Ky.

LOUISVILLE, Ky. — "Plastics in Major Household Appliances" will be the subject of a regional technical conference sponsored by the Society of Plastics Engineers' Kentuckiana Section on Oct. 25.

To convene in General Electric Co.'s Monogram Hall in Appliance Park, Louisville, the conference will cover virtually all aspects of the application of plastics in appliances from raw materials to inspection of finished parts.

The comprehensive technical program is divided into three basic parts — material trends, processing trends, and evaluation of plastics products. Of particular interest will be three panel discussions highlighting advances in materials for appliances, evaluation of plastics for specific appliances, and inspection tests for finished parts.

In addition, papers on plastics foams for insulation, latest processing and fabricating techniques, and flammability will also be presented.

Conference registration fees, which include luncheon and a copy of the RETEC preprint book, are: Advance Registration —$8 for SPE members and $10 for non-members; on-site registration—$10 and $12.

Requests for further information and advance registrations should be directed to H. G. Cooke, Jr., RETEC Registration Chairman, c/o Jones Dabney Co., 1481 South 11th St., Louisville, Ky.

Janitrol Holds Sales Management Conferences

COLUMBUS, Ohio—A series of regional sales management conferences has been announced by the Janitrol Heating & Air Conditioning Div., Midland-Ross Corp.

The conferences, offered to Janitrol "Select Dealers," started on June 22, in Indianapolis, and will be held in most major markets across the country.

The meetings will concentrate on practical solutions to retail sales problems. The subjects covered will include advertising, recruiting, selection, training, and management of retail sales personnel. The conferences will be one-day sessions, conducted by the Janitrol Institute of Dealer Management.

"A substantial number of heating and air conditioning salesmen are expected to be added by Janitrol Select Dealers as a result of these meetings," the company said. "These new salesmen will be trained in a similar series of regional factory sales training schools."

Ross D. Siragusa, Jr. In Admiral Sales Post

CHICAGO—Ross D. Siragusa, Jr., has been elected to the newly-created position of vice president - sales for Admiral Sales Corp., it was announced by Carl E. Lantz, president of the marketing subsidiary.

Siragusa had been vice president of the consumer electronics division.

ASA Steering Group Formed

To Resume Work on Building Code Requirements for Light, Ventilation

NEW YORK CITY — Standards work on building code requirements for light and ventilation will resume later this year by a reorganized sectional committee of the American Standards Association, the ASA announced.

The American Public Health Association, the American Society of Heating, Refrigerating & Air-Conditioning Engineers, and the Illuminating Engineering Society have asked the ASA to consider recommendations for an enlarged sectional committee, new administrative sponsors and a well-defined scope.

A four-member steering group of the ASA A53 Sectional Committee proposed reorganization of the committee at a recent meeting. The group expressed concern over the lack of standardization work in the field, the last effort resulting in an American Standard on light and ventilation requirements in 1946.

TENTATIVE PLANS

Tentative plans call for the formation of two subcommittees later this year, each to prepare drafts for minimum requirements for daylight and electric light and specifications for natural and mechanical ventilation and air conditioning. An appendix to the standard on the values of good practice recommendations for information purposes was also suggested.

Spokesmen for IES and ASHRAE indicated subcommittees would be organized in October to begin standards work. A target date of February, 1962, was set for the initial meeting of the reorganized sectional committee at which time preliminary drafts would be presented.

Pending approval by the Construction Standard Board of the ASA, the American Public Health Association will serve as administrative sponsor and ASHRAE and IES as co-sponsors. A total of 17 organizations and associations in the light and ventilation fields will be invited to participate on the sectional committee.

Steering committee members included Andrew T. Boggs and John G. Eadie of ASHRAE, Francis B. Elder of APHA, and C. L. Crouch of IES.

Fraser & Johnston Puts Service In Sales Dept., Names Tom R. McLean

SAN FRANCISCO—Fraser & Johnston Co. has placed service in the sales department and appointed Tom R. McLean service manager to head the service department. He will cover the United States. Until now service has been a function of engineering at F&J.

General Sales Manager E. A. Easton announced the new setup and said a strong program is being planned for air conditioning service. McLean will eventually take over furnace service also.

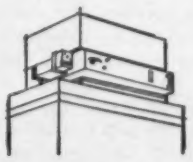
Jim Hardy will be McLean's assistant. Hardy has been in the air conditioning division with McLean who has been production manager of F&J's air conditioning plant for four years.

The first ELECTRONIC

Living Area Control Center provides a constant performance check. Indicates when collectors need washing. Permits remote operation of fan.

Filter Flag® indicates at furnace or air conditioner and at the Living Area Control Center when the protective screen needs cleaning.

Simple Washing Kit includes everything the homeowner needs to wash the air cleaner collectors (normally once every three months).



One-Side Access feature makes it possible to install the unit in any location. Clearance is required only for removal of the door assembly.

Iron Fireman Meeting In Boston Draws 400—Only 150 Expected

CLEVELAND—"They like us in Omaha, but they loved us in Boston!"

No, that's not a "show biz" report. That's how Warren Blanke, marketing manager of Iron Fireman, described the reception his company — and its "Custom Mark II" residential oil furnace and boiler—got in Boston recently.

The meeting was one of 44 staged late this spring by three "teams" from Iron Fireman's headquarters in Cleveland. Blanke's meetings, held before fuel oil dealers and heating and plumbing contractors who were not part of the Iron Fireman organization, ranged from Albany, N. Y. to Columbia, S. C., and as far west as Omaha.

The Boston meeting—a luncheon gathering, like all the others —had drawn about 150 registrations. That was no problem for the Charterhouse motel, the site of the meeting.

Then, the day of the meeting arrived — and the audience started pouring in. And it swelled, and swelled — until it finally reached close to 400 men! This called for a fast switch in plans.

Result: an 80 ft. by 40 ft. tent was ordered, rushed to the motel, and hastily erected near the swimming pool—and the meeting went on per schedule.

Nearly 400 determined men sat on hard-bottomed chairs and balanced their lunch on their laps—and stayed for the meeting that followed.

A number of men signed up as Custom Mark II dealers. And, as a result, Iron Fireman has assigned an additional district sales manager to the general Boston area—for the Custom Mark II alone, the manufacturer indicated.

Mid-Continent Metal Moves to Larger Plant

CHICAGO — Expansion pressures have made it necessary for Mid-Continent Metal Products Co., maker of "Lo-Blast" power gas burners, to move to substantially larger manufacturing quarters, the company announced.

"The new plant at 2717 N. Greenview Ave. provides about three times the space of the old plant and relieves the present overcrowded conditions, permitting more efficient manufacturing methods and warehousing," it was stated.

Cedonia Garden Apartments Equips All 390 Units with Electric Heating Units

BALTIMORE — A total electric project here, the 390-unit Cedonia garden apartments, will be completed this year.

All electric heating units and appliances used in the one and two-bedroom apartments have been supplied by the Westinghouse Electric Corp.

The project builders, Cedonia Apartments, Inc., originally planned to test public acceptance for electric heating in ten units, according to William H. Loeber, Westinghouse residential marketing manager, but public response was so enthusiastic that it will be used in all 390 units.

"Over 3,000 persons walked through the display apartments the first day they were opened for inspection, and rental applications exceeded, by five times, the number of apartments then ready for occupancy, it was stated.

Included in all apartments are thermostatically controlled, electric baseboard heating units, bathroom heaters, 12-cu.-ft. refrigerators, free standing 30-in. ranges, water heaters, food disposers, and optional room air conditioners.

Siegler Corp. Agrees To Stop Making Certain Claims—FTC Announces

WASHINGTON, D. C. — The Federal Trade Commission announced The Siegler Corp., trading as The Siegler Heater Co., Centralia, Ill., has agreed to stop making certain claims regarding its oil and gas space heaters.

The stipulation agreement does not constitute admission by the company that it has violated the law.

The FTC said the company agreed to stop claiming that the heaters:

Are as effective as central heating systems for heating multiple rooms, or otherwise misrepresenting their heating capacity;

Will adequately heat a 7 or 8-room dwelling, or any other number of rooms, unless the limiting conditions under which this may be accomplished are at the same time clearly and conspicuously disclosed; and that

The blower system used in such heaters will send all of the air in an average house through the heat tubes three times each hour, or otherwise misrepresenting their air moving capacity;

The motor with which they are equipped will last a lifetime, or otherwise misrepresenting the durability and longevity of the heaters or any components; and

That such heaters or any parts are guaranteed unless the nature and extent of the guarantee and how it will be honored are clearly and conspicuously disclosed.

Electric Radiant Ceiling Panels To Heat Apartments

CHICAGO — Heat by electric radiant ceiling panels will provide comfort for tenants of the Churchview Court Apartments, a 28-apartment building under construction at Waukegon Rd., and Grove St. in suburban, Glenview.

The two-story building, latest project of the Wahrer Construction Co., also will feature air conditioning.

The completely concealed heating system of Ceil Heat cable will be controlled by thermostats in each room. The installation of radiant ceiling heat by Lynn Electric Co. of Glenview will be the largest of its type in the northern suburbs, according to Public Service Co.

AIR CLEANER designed exclusively for the home!

Here's the profit package that introduces an entirely new concept in elegant living—the Self Cleaning Home! With this exclusive new air cleaner you sell *many* ideas . . . less housework, fewer cleaning and decorating bills and effective removal of airborne allergy irritants. And, you offer builders a dramatic new sales feature . . . guaranteed to stimulate interest in their homes. Either way, the Honeywell Air Cleaner can help you beat the cost-price squeeze—and it's good for your add-on business, too!

The complete unit comes to you as a package and can be installed simply. You keep full profits because the homeowner performs the simple maintenance himself. The initial low cost of the Honeywell Air Cleaner is also an important selling point. And because it requires no plumbing and fits easily into any forced air system, it can be installed for up to $100 less than other units.

Available in two sizes (20 x 25 and 16 x 25 in.), the Honeywell Air Cleaner is only 7 inches thick when installed in the return air duct. Handles up to 2200 CFM (about 5½ tons of cooling—220,000 BTU output, heating).

Tests by the National Bureau of Standards prove that the Honeywell Electronic Air Cleaner traps from 70 to 95% of all airborne particles, depending on rate of air flow. By comparison, standard mechanical filters have an efficiency range of from 5 to 8%; and charged media filters average less than 50% efficiency.

For complete details on Residential Electronic Air Cleaning and for a free merchandising kit, call your nearby Honeywell office. There are 112 throughout the country. Or, write Honeywell, Dept. AN-7-142, Minneapolis 8, Minnesota. In Canada, write Honeywell Controls, Ltd., Toronto 17, Ontario. *Sales and Service offices in all principal cities of the world.*

*Trademark

Honeywell

First in Control

SINCE 1885

HONEYWELL INTERNATIONAL
Sales and service offices in all principal cities of the world. Manufacturing in the United States, United Kingdom, Canada, Netherlands, Germany, France, Japan.

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

good and conscientious reporters.

A-O-K, subscribers. You're the boss. Herewith a few lame-brained contributions to the cause.

Stories of the Week

"Take it easy, dear," warned Mrs. Wife at a huge cocktail party. "You've been going to the bar every 10 minutes."

"Don't worry, sweetheart," he reassured. "I always say I'm bringing a fresh drink back to you."

"Condition cleared up — you needn't come back," pronounced a dermatologist proudly.

"But, doctor," Mrs. Patient wailed, "I must have an appointment next month. I want to finish the serial in one of your office magazines."

If a man looks a girl straight in the eyes, she'd better do something about her figure.

Your Wife Would Be Embarrassed, Too

Detroiter who works in the Advance Designing Dept. of an automotive manufacturer regularly drives home experimental cars. Their exteriors are those of current models. Hidden from view are improvements which need to be road-tested.

Last Saturday his wife drove one such all around their suburban village on shopping tours —and returned in tears.

"Everyone was laughing at me," she wailed, "and I don't know why."

Hubby inspected the vehicle. On the trunk compartment a promotion man had affixed a sign emblazoned with his firm's tryout advertising slogan:

"LIKE MY LOOKS? MY LOW PRICE IS ATTRACTIVE, TOO!"

Summer Solstice

Business was slow, so a contractor and his partner closed up and headed for a golf course.

"Jeeps," yiped Hank, "I forgot to lock the safe."

"So what? We're both here, aren't we?"

Grantland Rice, the "Dean of American Sportswriters," had an abundance of talent. Chief reason why he long will be remembered with affectionate admiration, however, is that he was "all heart — and a yard wide."

Prior to going overseas with the 15th Artillery in the first World War, Rice entrusted his life savings to his lawyer. The latter blew the $70,000 on poor investments and hasty gambles, then hung himself.

Gene Fowler reported that, upon hearing this forlorn news, Rice downed several quick shots of "sauce," and philosophized:

"All my fault. I shouldn't have handed him such a bundle of temptation."

Add Definitions

San Quentin: Pen with a lifetime guarantee.

Ouch!: Class yell of the School of Experience.

Add Newspaper Boners

All seats will be angled for an obstructed view of the orchestra.—*New York Times.*

Kennedy boarded the helicopter by swinging himself on the crutches along an inclined ramp, then was whiskey to the White House. — *Dallas Times Herald.*

Kennedy was the first U. S. President to dine at the palace with a fitted bodice and full skirt since Woodrow Wilson in 1918.—*San Pedro News-Pilot.*

Congress approved the compromise housing bill today and sent it to the White House. President Kennedy is expected to sing it tomorrow.—*New York Times.*

Weather forecast: Maine — Funny and cooler. — *Augusta Herald.*

He was the 612th person to die in the ding ling electric chair in the last 60 years.—*New York Journal-American.*

Press release from the Paris fashion house of Nina Ricci advises that, in madame's new couture, "the bust is narrow, flat, and rectangular, and is rarely seen before evening."

No quibbling, Nina. To see that phenomenon, we can wait 'til dark.

Barely Tolerable Tales

At the 20th class reunion Joe, who had been elected Most Likely to Succeed, showed up in a seedy suit and a third-hand Ford.

Sam, who hadn't been distinguished for anything in school, arrived in an air conditioned Cadillac, expensive clothing, and a big diamond stickpin in his Countess Mara cravatte.

"What's the secret of your success?" asked Joe, shyly.

"I knew right off I was dumb," explained Sam, gesturing with a big fat cigar. "So I looked around for a business where I didn't need to be smart like you and some of the others.

"I found an item I could make for a dollar and sell for five dollars. That steady four per cent really mounted up over the years."

Diner: "What's this fly doing in my ice cream?"

Waiter: "Probably likes winter sports."

Sam's guests long since had departed, but Sam himself was asleep, his head on the night club table.

"Let's throw him out," suggested the boss.

"No, no," protested Sam's waiter. "Every time I wake him up he pays the check again."

"What single factor was most dominant," posed a postcard questionnaire, "in your decision to purchase this product?"

Overwhelming majority of responses:

"My wife."

Municipal band finished a brassy number, and earned thunderous applause from its public park audience.

"What's the encore?" whispered a trombonist.

"Semper Fidelis March," confided the occupant of the nearest chair.

"Oh-h-h," groaned the querier. "That's what I was blasting out last number."

SALES
Bill Tennity, Pres.
WACIA

SERVICE
Paul Darby, Pres.
RSES

WHOLESALERS
E. P. Sorensen, Pres.
ARW

CONTRACTORS
Walter McCarty, Pres.
RACCA

MANUFACTURERS
Hy Jarvis, Chairman
ARI Expos. Committee

INDUSTRY
R. K. Serfass, Pres.
ARI

WE'LL ALL BE THERE
WILL YOU?

12TH NATIONAL EXPOSITION
AIR-CONDITIONING, HEATING
& REFRIGERATION INDUSTRY
LOS ANGELES • CALIFORNIA FEB. 12-15 • 1962

Here's the show you can't afford to miss—the biggest of all ARI Expositions. History-making opportunity to increase sales... talk to new sources of distribution... talk to manufacturers who can use your products... meet contractors and other specifiers ...establish and maintain your brand loyalty among service personnel... mingle with engineers in every phase of your industry.

This show already has a record number of national exhibitors. You owe it to your company's future in this great industry to exhibit; to yourself to attend in person. ARW, RACCA, RSES, ARI, NWAHACA, AND WACIA will all have a dominant place in this tremendous event. They'll all be there! Will You?

Plan to exhibit now! Contact: George E. Mills, Show Director
1346 Connecticut Avenue, N.W., Washington, D.C. • COlumbia 5-0405

NEW

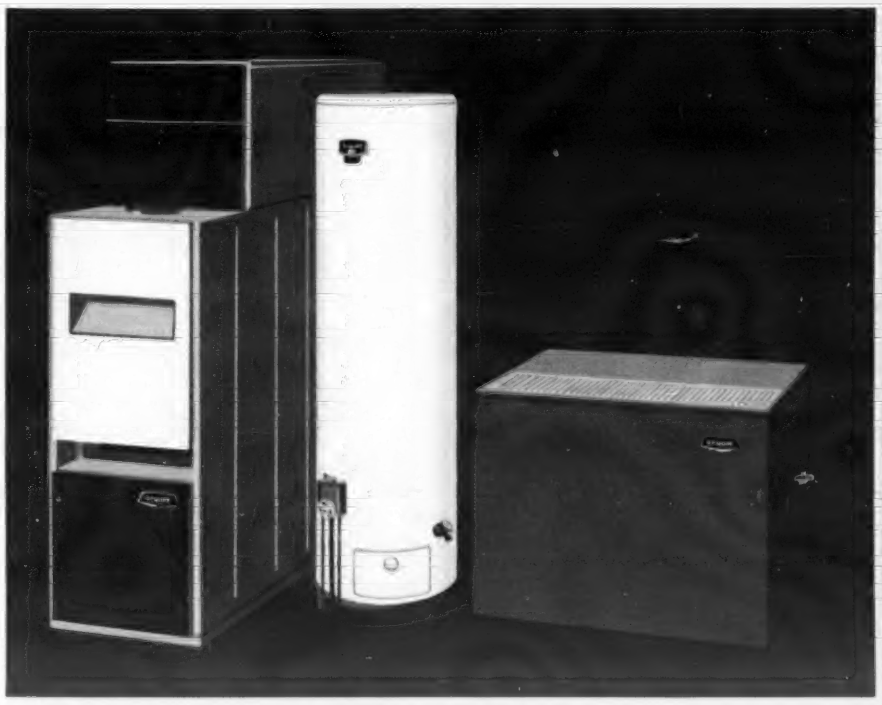
FROM

bryant

SPECIAL BUILDER PROPOSITION ON BRYANT HOME COMFORT CORE FOR TRACT HOMES AND APARTMENTS

KNOCKS SOX Off

THE "UNDER-$500-EXTRA" INSTALLED PRICE OF COMPLETE HOME COOLING REPORTED AT HOUSE & HOMES' RECENT BUILDERS' ROUND TABLE (House & Home, April, 1961)



BRYANT HOME COMFORT CORE includes furnace styled by Raymond Loewy, condenser, cooling coil and housing, thermostat and sub-base (heating-cooling). Water Heater optional.

For details on the Bryant "Builder Proposition" call immediately your local Bryant Distributor, Factory Branch — or D. W. Hoppock, Vice President, Bryant Manufacturing Company (MElrose 2-5471), Indianapolis, Indiana.

LOV

93

13

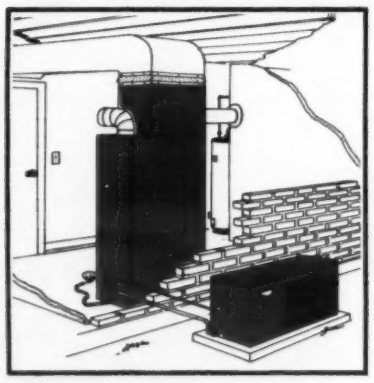
THE PROPOSITION YOU'VE WANTED!

Bryant's special "Builder Proposition" is set up to give you either a profit and/or a "sure-fire" selling advantage you have needed in going after tract home and apartment business. There are no "gimmicks", no "iffys". It is a clear-cut business proposition geared to your needs. You get regular Bryant quality products. We have placed Bryant's reputation squarely behind our offer. To get the details on how well you can make out please call immediately your local Bryant distributor, factory branch — or D. W. Hoppock, Vice President, Bryant Manufacturing Company, Indianapolis, Indiana.

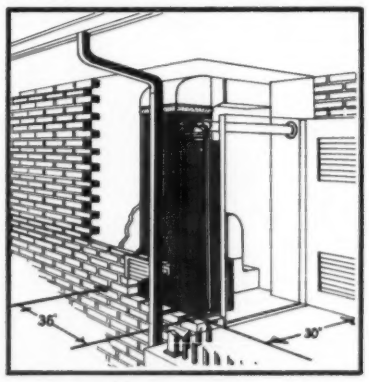
EXTRA-PROFIT-ARITHMETIC We would like to show you the figures that prove that you *can* clear a good profit on every home you equip (and get a lot more of them) with a Bryant Home Comfort Core.

GET THE "JUMP ON COMPETITION" You can now offer year 'round air conditioning to tract home and apartment builders, for a few dollars more than comparable homes without it.

NEW SPACE-LABOR-MONEY SAVING DESIGN



FOR HOMES AND GARDEN APARTMENTS. This view shows how unit can be *placed within 4 inches of outside wall* with no sacrifice of operating efficiency. Extended tubing permits fast, foolproof installation.



FOR APARTMENTS. This view shows condenser, furnace, cooling coil and ducting housed in an outside closet only 30" x 36". Note how condensate drains directly into downspout.

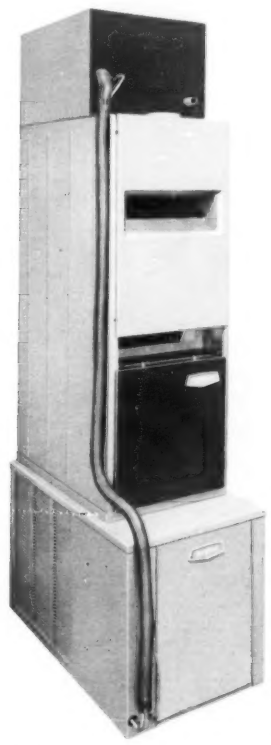
Join up with

bryant

the company on the move!!!!!!

BRYANT MANUFACTURING COMPANY • Indianapolis 7, Indiana

SOLID LOCAL SUPPORT in layout, sizing and supervision of jobs by factory-trained air conditioning specialists, is available through your local Bryant Distributor or Factory Branch.



COMPLETE HOME COMFORT CORE The cooling coil, 2-ton condensing unit and 80,000 Btu furnace are combined in a compact yet easy to service package. In stack-on installation, furnace opening is provided in condenser cover.

USE BRYANT'S Home Comfort Core Merchandising Plan (all ready to use) to get the inside track on and close those tough jobs. Your Bryant Distributor or Factory Branch has all the facts.

12 REASONS WHY DEALERS LIKE BRYANT

1. Most Complete Line. 2. Exclusive selling features. 3. Fast Delivery. 4. Most flexible financing and credit aid. 5. On-the-spot counsel. 6. Sales and technical training. 7. Business management guidance. 8. Local ad campaigns. 9. Sound sales policies. 10. National reputation. 11. Gas air conditioning. 12. Bryant's financial strength.

Aluminu Problem

SEBRING, Fl quantity of glas tectural design o Baptist church some unusual a installation prob Electric Co., Wa conditioning distr land, Fla.

The problem w the installation house packaged unit in the chur tioning system.

The ultra-mode to be unique i States, has beer architect Reginal Bradenton, Fla.

The building

Task Force Attack Bui Code Prob

WASHINGTON lowing a two-day meeting of an Ad on Building Code groups will meet ferent aspects o and draw up auth ments on them.

The council is representatives engineers, trad and model code The organizati held here, were the Chamber of the United States

Council Chairm Kirkland, assista dent of the Am Steel Institute, sa luncheon that the need to clarity c the general public

Kirkland said t come together to tional Chamber to which progre made; to give its steps to be taken i enacting, and codes that can le progress, and to p information to th will cast a true subject.

He said he was would draw up "t statement on code has ever been pr

William B. Tab of the American Architects and ch AIA's Committee Codes, declared wholeheartedly be proach taken by th said its organizati sign that some of lems which have be eliminated.

The next meetin council will be he ber.

For Your Rep

"Emergency Diagnosis, metic Unit Electric C John L. Zant, mail th name and address to ing, Heating & Refri 450 W. Fort, Detroit 2

Only 25¢

Aluminum and Glass Church Cooling Problems Solved by 50-Ton Roof Unit

SEBRING, Fla. — A large quantity of glass in the architectural design of the new First Baptist church here presented some unusual air conditioning installation problems to Engle Electric Co., Westinghouse air conditioning distributor in Lakeland, Fla.

The problem was solved with the installation of a Westinghouse packaged 50-ton cooling unit in the church's air conditioning system.

The ultra-modern church, said to be unique in the United States, has been designed by architect Reginald C. Knight of Bradenton, Fla.

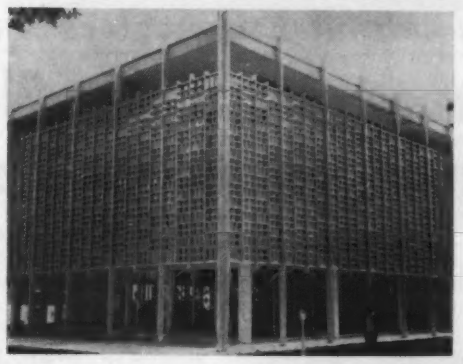
The building is entirely of aluminum and glass with poured concrete floors and roof. It is surrounded and obscured by an aluminum and glass veil that breaks the sun and shade into a multitude of varying patterns.

Many of the walls are constructed of glass to permit entry of winter sun. However, the structure was situated in relation to the sun and the design of the aluminum veil so as to exclude, as much as possible, the hot summer sun's rays.

Engle Electric designed and installed the entire air conditioning system around the Westinghouse unit (Type LU-511).

To preserve the architect's interior design, all ductwork was installed on the roof of the church. Air enters the building through ceiling mounted diffusers. A system of motorized dampers furnishes conditioned air to either the sanctuary or educational building as required. Electric resistance-type strip heaters are installed within the ductwork for winter heating.

The Type LU "Unitaires" are large self-contained air conditioning plants. Each unit includes a six-row evaporator coil with a cleanable condenser. In the First Baptist church installation the fan section is side mounted. The units can be adapted, however, for either vertical or horizontal air discharge, and the fan section can be top or side mounted.



EXTERIOR of First Baptist church of Sebring, Fla. shows aluminum and glass construction that afforded some of the air conditioning problems.

WESTINGHOUSE 50-ton packaged cooling unit was installed on roof, as was all ductwork, to be compatible with the architect's design for the structure.

Task Forces To Attack Building Code Problems

WASHINGTON, D. C. — Following a two-day organizational meeting of an Advisory Council on Building Codes, several task groups will meet to attack different aspects of the problem and draw up authoritative statements on them.

The council is composed of representatives of architects, engineers, trade associations, and model code organizations. The organizational sessions, held here, were sponsored by the Chamber of Commerce of the United States.

Council Chairman William G. Kirkland, assistant vice president of the American Iron & Steel Institute, said at a closing luncheon that there is an urgent need to clarity code affairs to the general public.

Kirkland said the council had come together to advise the National Chamber on the degree to which progress has been made; to give its opinion on the steps to be taken in formulating, enacting, and administering codes that can lead to further progress, and to provide general information to the public that will cast a true light on the subject.

He said he was sure the group would draw up "the most clear statement on code affairs that has ever been promulgated."

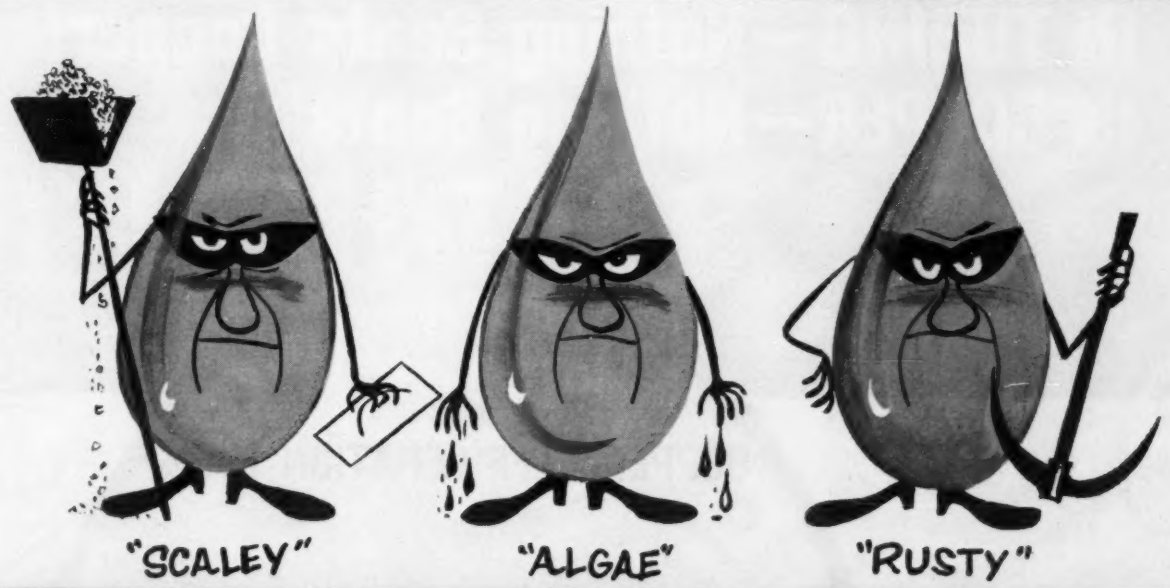
William B. Tabler, a Fellow of the American Institute of Architects and chairman of the AIA's Committee on Building Codes, declared that he was wholeheartedly behind the approach taken by the council. He said its organization was a real sign that some of the code problems which have hit cities can be eliminated.

The next meeting of the full council will be held in September.

For Your Reprint Copy

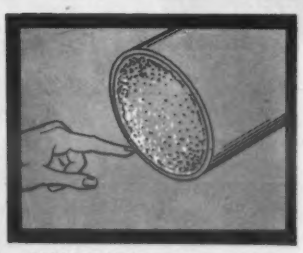
"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

Only 25¢ each.



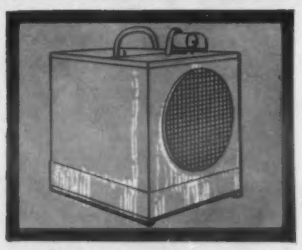
THESE THREE DRIPS MEAN TROUBLE!

Scale, algae and corrosion are the worst sort of thieves in your cooling system. Scale robs you of efficiency; slime and algae sneak in to gum up the works; and corrosion eats away at your pipes — The result — breakdown and expensive repair.



CHEMICATOR keeps scale forming deposits in solution to prevent scale.

CHEMICATOR kills algae and fungus growths, preventing slime and deterioration.



CHEMICATOR positively inhibits the corrosive qualities of water.

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Business Consultant Emphasizes ARW's Role

Better Management, Better Planning, Better Administration Vital to Wholesaler's Growth

Part 1

The test of wholesaling is "To do things for the manufacturer and the retailer more economically than they can do these things themselves."

We have often heard of the wholesaler being referred to as a "Middleman," and I think at last I have found the meaning of this word. You wholesalers are in "The Middle" of the Lower Price—High Cost Squeeze.

Let me make this warning. Many firms in your industry will be going out of business for one or more of the following reasons:

1. They won't have the capital to expand.
2. They don't have the management to operate a larger business.
3. They won't have trained replacements for those who started the business.

If your business is to continue to grow, you are going to have to become better managers, better planners, better administrators. It may have taken only a small amount of money and technical know-how to get into this business, but it is going to take a lot of management know-how to stay in it.

Let us look at the record of other wholesale groups. Those who have matured and remained profitable on reaching maturity have been the most avid supporters of management training, of statistical information interchange, and have supported an active and virile trade association. That is, in this day, the only way in which independent businesses like yours are going to be able to receive the kind of information you will need to meet the challenge of the "Soaring Sixties."

Now this may sound strange to you—why should you give information about your business to anyone? It is your business. No one can tell you what to do about your business. But business is like life, and like marriage, perhaps, in that you have to give to get.

Let me just give you one example of what a trade association can do by cooperation. The luggage industry was concerned that their sales were not rising as rapidly as our economy. The trade association had a research group study the problem. This group found that women buy most luggage, both men's and women's. Unfortunately, most manufacturers had been concentrating their advertising in men's magazines.

As a result of this, the entire advertising emphasis of the industry was changed and everyone benefited by it. No one manufacturer could have afforded this research. It took trade association activity to do it.

ARW Program Must Be Expanded Ultimately

Ultimately, ARW's program must be greatly expanded. From sales trends—to inventory and accounts receivable trends—to a full scale cost of doing business study.

Let's look a moment at the profit squeeze. How does it work? How does it affect you?

Taking Lower Mark-Up

Now, the first half of the profit squeeze comes from the top, and has to do with the pressure resulting from the desire for increased volume, and the willingness to take a lower mark-up.

This practice is based mainly on the theory that most of the costs are fixed, and anything priced above cost adds some contribution to the fixed overhead.

In order to engage in this activity (commonly known as "price cutting"), you must make sure that your fixed costs are adequately covered by other transactions which are at sufficient gross profit.

What we can do, then, involves a lot of platitudes that are not really helpful in finding the real answer.

For instance:

1. We can sell harder.
2. We can raise prices.
3. We can open branches.
4. We can hire a salesman.
5. We can add more profitable lines.
6. We can drop less profitable lines.
7. We can extend easier credit.
8. We can carry a bigger inventory.

Rising Expense Level

Now, let us look at the ever increasing expense level that is the other half of the profit squeeze.

You all know expenses are rising. There are inflationary pressures. And there is your good-heartedness with respect to the oldtimers. And then there are the mistakes that everyone makes. And there is the plain, normal complexity of a large

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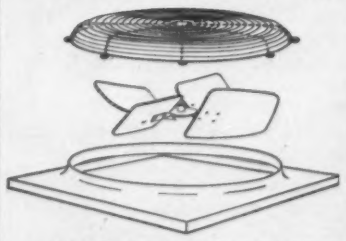

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operation that makes it difficult to know where your dollars are going.

Let's look at this complexity of fixed costs. If we decide we need a new warehouse of larger size, we find one day that our cost has jumped from $400 per month to—say—$800 per month. Did the volume jump 100% in that period? Obviously not, nor will it double in the ensuing year; but our rent, as a per cent of sales, is up 66% if our volume rises 20%. The rent is up 100% if there is no rise in volume; and if there is a decline in volume the ratio is even worse.

Now, this is true of many elements of expense—putting on a salesman; hiring a clerk; adding a telephone; purchasing a machine. Although we may think of these costs as controllable, and variable with volume, they are really fixed and not controllable.

Economists are likely to say that units of production in a business are not infinitely divisible. That is, where you really need one tenth of a sales clerk, you cannot hire one tenth. Where you need only two hours of service per day of an accounting machine, you have to buy 24 hours a day of use. And although you may balk at the adding of fixed costs to your operation, at some point they have to be added and you must add them in the units which are available.

This means that the instant a new unit of labor or production is added, your fixed costs rise out of proportion to the immediate rise in volume.

Everything might still be fine if the volume just kept going up. All of the inefficiency and waste would be neatly absorbed by expanded gross profit, and we would continue to pat ourselves on the back for a job well done.

But the inevitable must come; the rate of growth must slow down as it does at some point for every company. It may even stop growing for a while, or decline.

There Is No Pat Answer

Now, there is no pat answer to all of this. There is no one formula on how to balance improper proportions of all those ingredients that go to make up a business. There is no way, for instance, to beat the rise in Social Security payments, which started at 1%, are now at 6%, (you really pay the employee's 3%), and will be 15% to 20% by 1970.

Salaries, which make up 70% of a wholesaler's overhead, are going to continue to rise, even if you are not unionized. They will follow the pattern set by Reuther and Hoffa.

Your increases in expenses, which will be almost automatic, cannot easily be met by "Automation." Your business will have to remain pretty much a hand labor operation.

The retailer has met this problem of labor costs by discounting, which is his method of lowering labor cost by passing the "labor" on to the consumer.

What, then, is the answer?

Over the next five years things are going to move swiftly and not always pleasantly for you. It will be difficult to ward off the inevitable profit squeeze, but you must prevent it from becoming a death grip that squeezes profits dry.

You Must Become Professional Managers

You must become professional managers, assisted by a TRULY PROFESSIONAL Association, making your decisions on the basis of the best facts that can be made available to you.

Whereas your business has enjoyed spectacular, almost automatic growth, you will have to substitute planned growth.

Where your selection of lines was almost predetermined for you, you must now use planned selection.

Where you had gross margins set for you, you must now substitute planned gross margins.

Where you once took the business that came your way, you must now go after the business that is good for you; you must do planned marketing.

Now to define management. Management is a function of planning, organizing, delegating, and controlling all of your business resources to the end that the objectives of your business will be successfully attained. Management is combining men, methods, money, and materials in the proper proportion. Management is different from purchasing, warehousing, selling, bookkeeping, or collecting accounts. It is a specialized function in a business, a function of balancing all the activities in such a way that desirable results are accomplished.

First of all, management is planning. If you started your own business, as many wholesalers have, planning was the first management function you performed before you committed

(Continued on next page)

The role of the manager of a wholesaling business in developing a more efficient operation currently, and in planning for the future, was outlined in a speech at the Region 5 meeting of Air Conditioning & Refrigeration Wholesalers Association by George C. Webster. Head of an air conditioning wholesaling firm, Webster is also widely known as a management consultant, and served as moderator for a forum on management problems at ARW's convention last Fall. The principles which are set forth in this condensation of his talk may apply as well to any large dealer-contractor firm. (This is the first of a two-part article.)

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Series 219 without external range adjustment.
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TEMPERATURE CONTROL
Series 239 has both external range and differential adjustment.

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Wholesalers Must Plan for Growth--

(Continued from Page 13)

yourself to the responsibilities of owning and operating your own business. Planning is deciding in advance what is to be done, it is laying out the course of the enterprise. The process of planning involved the following steps: investigation; examination; consideration, exploration; and prediction.

Thus, the first stage of planning is a study of the problem. The second stage is to develop the solution based on:

1. Clarifying the problem;
2. Determining alternative courses of action;
3. Getting all the possible facts that bear on the problem;
4. Analyzing these facts and discarding what is unnecessary, while logically arranging the information that bears on the problem; and
5. Deciding on the action to be taken.

Planning involves objectives, policies, and programs. Objectives both short range and long range. What should the objectives of your company be? Will the policies of your company satisfy its objectives? Remember, you create policy even though you think you don't, since the things you do day to day become the policy of the company. Your policies should conform with the objectives of the company and should be written down in order to make certain that they are really what you want.

Some of you may say you have no policy. That you make the decisions as the need arises. A shipping clerk comes into your office and says: "How should we ship this order?"—and you say: "Ship it through Houston." The very next day he brings in a similar order and asks the same question, and you say: "Didn't I tell you yesterday—ship it through Houston." The third day he brings in a similar order and asks: "How do we ship it?" and you say: "Look, you darn fool. I have told you twice—ship it through Houston; now get out of my office, you idiot."

And so you are creating policy, whether you know it or not. Years later they will still be shipping it through Houston and you may blow your top because by this time it might be better to ship it through Dallas.

You need programs. Who will administer your policies? How will your plans be carried out? What procedures will be used? There has to be a program for carrying out the policies of your company, and decisions have to be made in conformance with the policies of your organization.

As top management in your company you should be planning its long-range growth. You should be investigating new products, new markets, better credit policies, tighter inventory controls, new methods of financing, better employe relations, more effective sales management, enlightened sales policy, sound customer relations. You have to be thinking about where your company will be 5-10-15- and 20 years from now.

Since every plan involves something to be done in the future, there is always an element of risk. But remember that business is a process of trial and error, or experimentation and research. Although we may never be able to forecast with complete accuracy, the more carefully we plan for the future the more likely we are to reach our objectives.

(To Be Continued)

Pacific Industries Acquires Marketing Firm for So. Calif.

SAN FRANCISCO — Pacific Industries, Inc., will acquire a Southern California marketing company for its Custom-Aire Products heating and air conditioning division, Henry L. McIntyre, president, announced.

He said negotiations have been concluded for the purchase of the Reliable Steel Supply Co., Los Angeles, through an exchange of stock, subject to the approval of the California Commissioner of Corporations and the completion of other legal requirements.

Reliable is a distributor of heating, ventilating, and air conditioning equipment and related items.

"Our Custom-Aire division has always held a strong manufacturing and marketing position in Northern California," McIntyre said. "We acquired production facilities in Southern California last January, and are now consolidating our marketing position in that important building area."

All reliable shares are held by Samuel W. Block, president; Martin N. Graham, vice president; and Star Steel Supply Co. of Detroit and Houston, distributor of residential heating and air conditioning equipment in those areas.

Block and Graham will continue to hold their present management responsibilities after the acquisition is completed.

Reliable has 80 employes and owns its facilities at 740 East 111th Place, Los Angeles.

Drayer-Hanson Names 5 New Distributors

LOS ANGELES — Drayer-Hanson Div., Hi-Press Air Conditioning of America, Inc., continued its expansion of local-area distribution outlets nationwide with the selection of five new distributor groups in major marketing areas.

Irv. Secord, national sales manager, said John F. Scanlan, Inc., Philadelphia, will represent the West Coast air conditioning manufacturer in the Greater Philadelphia trading area.

For the first time, Maryland will have a direct D-H sales arm via Consolidated Supply Co., Inc., Baltimore. Coverage will be the Greater Baltimore trading area.

In Boston (for that city and environs), a new distributor organization named is Homans-Kohler. Company principal is Joe Kohler.

In the South there will be multi-state coverage through the branch offices of F. J. Evans Co.; in Memphis, Tenn., and Jackson, Miss. Total territory will encompass Mississippi, western Tennessee, and eastern Arkansas.

Selected in the Nation's capitol (for Washington, D. C. itself) is Holliday, Inc. Firm principal is C. W. Holliday.

Marking a return to D-H's rosting is re-naming of Herlin Engineering Co., Albuquerque, N. M. Company head Barc Barnett will handle D-H negotiations in that state, particularly the White Sands sector.

NEW DEVELOPMENTS FROM DU PONT:

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Mounted on wheels, this handy assistant is the latest Du Pont effort to make your servicing job easier and more effective. And when it's time to recharge the system, you'll find Du Pont's improved lightweight "Zephyr" cylinder makes the job easier.

Take a "Zephyr" on your next burnout . . . or any other job. You can't go wrong.

Leading air conditioning and refrigeration wholesalers who sell "Freon" refrigerants can probably rent you one of the new Du Pont units now. But if you'd like to build your own, write to: Du Pont Co., N-2420AA, "Freon" Products Division, Wilmington 98, Delaware. Ask for Bulletin FD-1.

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Editorial

Good News from Harvard: 'STRIKES ARE OBSOLETE'

LONG before Harvardman Jack Kennedy was elected by a miniscule margin—and began appointing myriads of Harvarders to public office—this editorial page was waging a running feud with a couple of left-wing Harvard professors.

Harvard was big enough to ignore this, of course; and Kennedy probably never even heard of it. Now it is a pleasure to announce that we've found a Harvard professor who is "on the beam," according to our business-focussed lights.

E. Robert Livernash, who is Professor of Business Administration in the graduate school at Harvard university, avers that "strikes normally are not worth their costs."

In this statement he corroborates previous NEWS editorials (many of which plaintively ran counter to the-popular-trend-of-thinking). Three economic trends and conditions are likely to prevail during the 1960's, according to Dr. Livernash. They are:

1. A large growth in the labor force.

2. A huge expansion of age groups under 25 and over 45, with the latter of particular significance.

3. A relative decline in blue collar employment and an increase in white collar jobs.

All these add up to a need for re-evaluation of unions and their previous methods of dominating both their members and the national economy.

Dr. Livernash believes that the three trends eventually will alter public opinion (which for three decades seemingly has felt unions can do no wrong) and that subsequent regulation of union affairs by government will "bring pressure upon unions not only toward reform but toward reduced militancy in order to avoid additional controls."

Quite possible these Three Economic Trends will put strikes in the same category with wife-beating, dog-kicking, and reckless driving on expressways!

"The difficulty with government intervention, particularly fact-finding with recommendations, is not that they do not work at times when used in a mediatory manner, but that they lend themselves by their mechanism not to the resolution of disputes but to government intervention which assists one party or the other in the attainment of its immediate objectives," adds this Harvard professor.

"They have the effect of transferring decision making to government. Furthermore, the overwhelming mandate of public officials entering disputes is not to attempt to define the public interest, but rather to settle the dispute."

Collective bargaining has not failed in this country. It has made substantial progress. It remains to be seen whether or not public tolerance will allow it to develop its own checks and balances. Continues the professor:

"The major hope is that unions themselves will place the avoidance of crises high on their private agenda of priorities. If not, government controls will ensue."

This Harvard man is sensible. Let's hope his former colleagues, now in the Kennedy government, equally will be prescient. Our U.S.A. is engaged in a locked-to-death struggle with a Communist conspiracy for control of the world—and personal survival of the human race. Khrushchev (no fool) has renounced atomic war. "We will bury you commercially," he boasts. His disciplined millions do what they're told to do. They never strike.

In this live-or-die world environment, aren't U.S.A. strikes obsolete, as this probably lonesome Harvard professor avers?

Thoughts on Communications

No one is exempt from talking nonsense; the misfortune is to do it solemnly.—Montaigne.

Unless one is a genius, it is best to aim at being intelligible.—A. Hope.

Take care of the sense and the sounds will take care of themselves.—Carroll.

There is no reason why the same man should like the same book at 18 and at 48.—Ezra Pound.

Reading maketh a full man, conference a ready man, and writing an exact man.—Francis Bacon.

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TWO DEAD BIRDS— ONE DEAD MOUSE— *(and a Partridge In a Pear Tree)*

International Heater Co.
Utica, N. Y.

Editor:

We got such an unusual service report from one of our salesmen out in the middle West recently that we thought you might be interested in publishing it in your paper.

The unit referred to is a condensing unit of a 3-ton air conditioner which is located out in the backyard behind the residence. The condenser coil in this unit is substantially horizontal over the condenser fan which is discharging vertically upward. The fan is protected with grilles on four sides and a cover over the top. A catalogue sheet enclosed shows the type of this unit. The young boy must have shoved his collection of junk into the unit through the louvers.

ALLEN TRASK,
Chief Engineer, Cooling

Date: 6-26-61
Subject: K256 Unit Claimed to cut off at thermal overload.
From: Ed Marcum

My phone call to you on June 20th concerning the thermal overload trouble on above unit was a waste of money on my part, because of listening to the installer before inspecting the unit. I found on the high side coil over one quarter inch layer of lint, pieces of paper, leaves, etc., which was restricting the air.

Although the following items were not hindering the performance of the unit, I removed from the top of the coil, beneath the fan: 27 rocks, 5 marbles, 2 dead birds, 1 dead mouse, 3 arrow heads, 1 Sioux Indian Chief's headband and several sticks.

The owner's five-year-old son (who was helping me) said "me don't knowed who did it."

SURPRISED AT NEWS READERSHIP

Sealed Unit Parts Co., Inc.
1178 East 180th St.
New York 60

Editor:

Reaction to my recent series of articles on capillary tubes has been the kind of stuff that makes ordinary people want to write.

Dale, I never realized the diversified type of reader that subscribes to AIR CONDITIONING, HEATING & REFRIGERATION NEWS. I've been asked to bid on special applications for cap tubes on ultrasonic aircraft instrument cooling apparatus; manufacturers who I thought never read anything else than the *Wall Street Journal* have complimented the articles; and even my competitors have had nice things to say. So let me throw a few bouquets at you—the Inspirer.

HENRY EHRENS,
President

MORE ON SALES ACADEMY

Phoenix Refrigeration, Inc.
Cleveland, Ohio

Editor:

The idea of a Sales Academy is the best idea I have heard in years.

Keep at this idea, I'm with you 100%.

THOMAS G. HOLMOK,
Vice President

Wappingers Falls, N. Y.

Editor:

Re—Reaction—Pregnant Idea for Our Industry—An Air Conditioning Sales Academy.

All I can say: It's about time someone realized the salesman is needed instead of an order taker.

Let's forget the Dale Carnegie Concept.

HENRY F. BOEHM, JR.

AIR CONDITIONING HEATING & REFRIGERATION NEWS
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Summaries of ASHRAE Technical Sessions Held In Denver

By
Phil B. Redeker
Frank J. Versagi

Here are summaries of several technical sessions held during ASHRAE's 68th annual meeting in Denver. .News from the business sessions appeared in earlier issues of the NEWS.

Mylar and Alcohol—Yes, But

"Our recommendation is simply that methanol should never be added, in any amount to a hermetic refrigeration cycle containing 'Mylar' polyester film."

This was the conclusion of General Electric Chemist C. J. Bushouse, Holland, Mich., after he described the tests in sealed tubes and on actual units which led G-E to this conclusion about the incompatibility of the new plastic motor insulation and alcohol. Bushouse went further; he warned against the use of *any* anti-freeze compound in a hermetic system using a Mylar-insulated motor. (See Tech Center, June 19, 1961, for a full discussion of the problem with Mylar and alcohol.)

Floor discussion reached the point where several well known authorities were expressing strong disapproval against the use of alcohol in any system, whether or not it contains Mylar.

Strong objection to this viewpoint came from one of the few remaining major manufacturers who still uses alcohol in its factory-sealed systems. "We, too, have been able to produce undesirable reactions between alcohol and some system materials—in the laboratory. But we have hundreds of thousands, millions of units out containing alcohol, and we know that we have no trouble due to its presence.

"The alcohol, itself, must be dry and clean; its quantity must be measured, but it is effective, without being harmful."

Asked by the NEWS why the insistence on alcohol, the manufacturer answered, "Economics. Beyond a certain point, it is inefficient to attempt to evacuate and dry mass produced cycles. At that point of diminishing returns, we use alcohol. We use no drier. We have no problems."

Evaluation Procedure for Odor Control Methods

"Evaluation Procedure for Odor-Control Methods," a study by W. F. Kerka, research engineer for the ASHRAE laboratory, presented as a paper at the society's annual meeting, turned up some interesting comments on odor-control methods generally.

Methods of odor control studied included (1) modification, through a non-reactant, volatile liquid; (2) sorption, through activated coconut-shell carbon; and (3) oxidation, through small ozone-generating lamps. Evaluation method consisted of a panel of from four to eight persons making a direct and immediate appraisal of the environment with a rate scale. Odorants in the test were those from fresh cigarette smoke, synthetic kitchen malodor, and iso-valeric acid.

Significant reduction in malodor level can be achieved by treatment with odor modifiers, the test revealed, but the odor of the modifier is also perceptible.

Significant reduction in malodor level can result from treatment with activated carbon. With the use of activated carbon, a progressively lower cigar malodor level and over-all level was evident with increased treatment time.

Reduction of odor levels by ozone at concentrations slightly above threshold is not statistically conclusive by the results developed in the study. There appeared to be no significant reduction of the malodor level by the ozone as compared to the natural decay of the malodor alone, except possibly at the longest treatment time, and then the level of ozone was so high that masking of the malodor probably took place.

Slant/Fin Names Richard

RICHMOND HILL, N.Y. — Fred D. Richard, 31, has been appointed advertising manager of Slant/Fin Radiator Corp., manufacturers of baseboard and commercial finned tube radiation.

Before joining Slant/Fin earlier this year, Richard served as director of field services for the National Better Heating-Cooling Council.

Calculating Solar Heat Gains Through Plastic Dome Skylights

Solar heat gains through a number of plastic dome skylights, can be determined for almost any location and time of year by use of design factors given in the paper "Solar Heat Gains Through Domed Skylights" prepared by L. F. Schutrum and N. Ozisik and presented at the ASHRAE meeting, plus a knowledge of the solar altitude and intensity.

For a given transmittance the total solar heat gain is highest for a material having no solar reflectance, and lowest for a material having no solar absorptance. Skylights with curbing and with the diffuser follow the same trends percentagewise. The difference where there is no solar reflectance is an increase in heat gain in the order of some 50%.

In the discussion of this paper, it was stated that Rohm & Haas Chemical Co. bulletin PL-351 A offers data on transmittance through various types of plastic domes.

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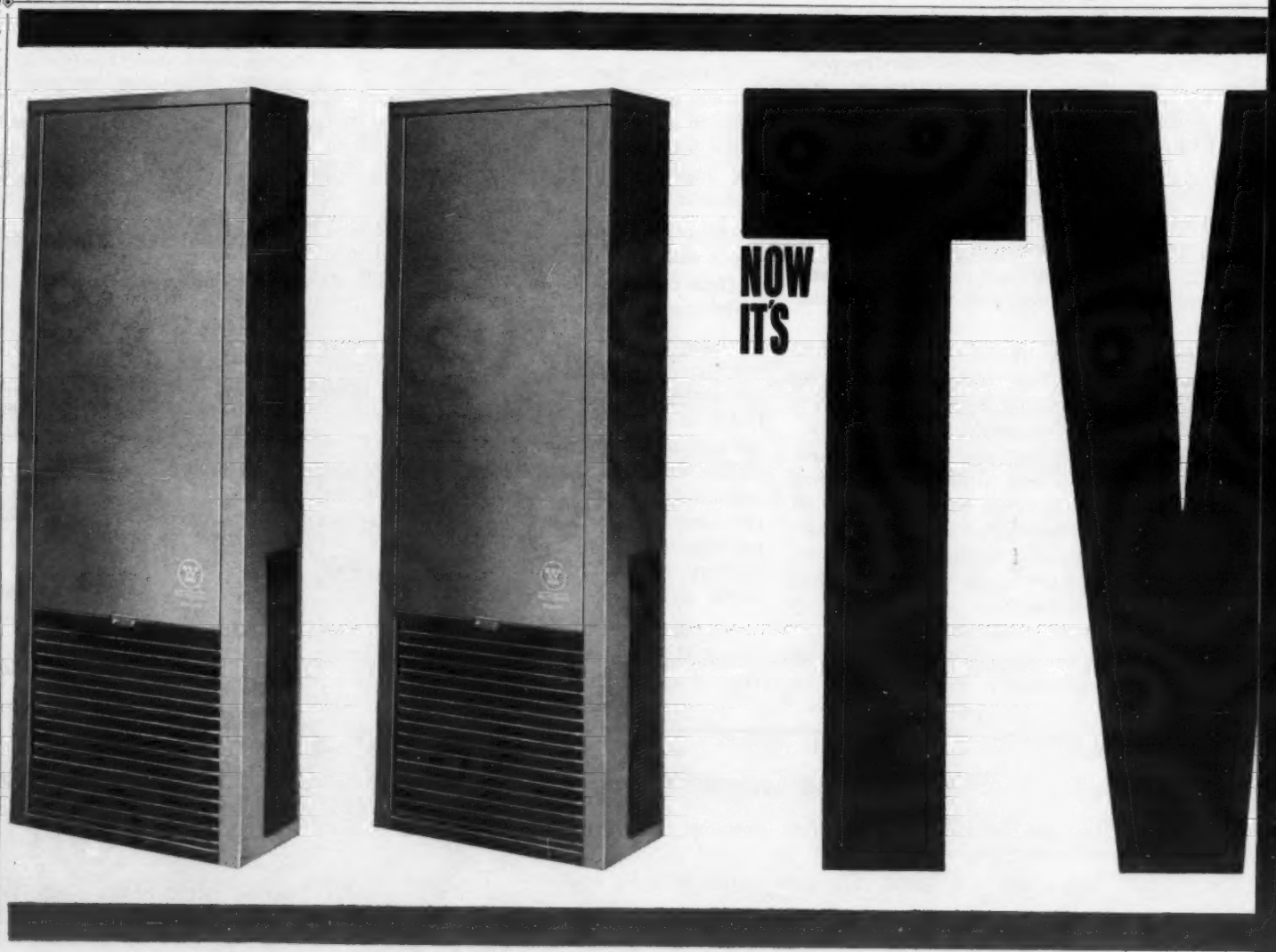
Only 25¢ each.



WhispAir now available as a cooling unit! perfect twin to the WhispAir heat pump

Refrigerant Mixtures Allow System Flexibility

"The use of mixed refrigerants provides almost unlimited possibilities for varying the capacity of refrigerating systems. . . . It should be possible to tailor the refrigerant mixture to fit the compressor, in many instances, rather than vice versa. . . . Up to 20% of Refrigerant-12 can be added to an R-22 system, to aid in oil return, with only a moderate effect on system capacity."

These unusual suggestions came from D. D. Chapman, "Freon" Products Laboratory, du Pont, who commented on the paper prepared by him and R. C. McHarness.

"The use of refrigerant mixtures can reduce the number of models needed to meet varying capacities—with reasonable care and knowledge," Chapman stated, although he warned against blind usage of such mixtures without thought to the equipment in which it will be used.

"You don't get something for nothing. If you raise capacity of the system, you will probably need a larger motor to handle the increase."

The du Pont scientist showed that the usual loss of capacity when 60-cycle equipment is used on 50-cycle power could be averted by use of refrigerant mixtures.

He listed several refrigerants, azeotropes, and mixtures which have been studied.

From the floor came a warning, "While the paper indicates interesting possibilities, I think it is unwise for the mechanical engineer to expect the chemist to do his refrigerating engineering for him."

Estimating Annual Energy Use

Faced with the need to air condition a 5-million-dollar addition to a Navy hospital, A. Eugene Congress studied five different schemes:

1) A 900-ton hermetic centrifugal compressor, electric motor drive, electric auxiliaries;

2) 125 psi steam turbines driving the chilled water and condenser circulating water pumps, turbines exhausting at 12 psi to 900-ton absorption machine, electric motor drives for cooling tower fans;

3) 900-ton centrifugal compressor, 125 psi steam turbine driver exhausting to 2.5-in. mercury condenser pressure, electric auxiliaries;

4) 900-ton lithium bromide absorption machine (12 psi steam), electric auxiliaries;

5) split cycles: 125 psi steam turbine driving a 300-ton centrifugal compressor; turbine exhausting at 12 psi to a 600-ton absorption machine, electric auxiliaries.

After long, involved studies of initial capital investment and estimated annual operating cost of the several systems, Congress, who is head, air conditioning and research section, power generation branch, Bureau of Yards & Docks, chose the system employing turbine-driven chilled water and condenser pumps exhausting to an absorption unit and the system using combination turbine-driven compressor exhausting to an absorption unit as most economical.

"However, it is conceded that the selection which was most economical and logical under the conditions surrounding this installation may not be the same for other installations," concluded Congress.

Hot Box Makes Heat Transmission Measurements Easier

A detailed description of a guarded hot box used in conjunction with a cold room for the measurement of heat transmission coefficients of building sections at conditions closely simulating those used for design calculations was offered in a paper by W. P. Brown, K. R. Solvason, and A. G. Wilson, all with the National Research Council of Canada.

"It has been shown that heat flow through any 4-by-8-ft section of test walls can be reliably metered with the equipment described in this paper. . . . Heat transmission coeffcients can be reproduced within 1.0%," according to the authors.

The End of a Study?

Results obtained in the study of the possibility of using fluorocarbon refrigerants in absorption cycles have led to the tentative conclusion that such systems are not likely to prove practicable. Studies of the solubilities of Refrigerants 11, 21, and 22 in organic solvents containing a nitrogen atom and in mixtures of liquids have proved disappointing.

While this was not explicitly stated, the consensus among the audience was that Lyle F. Albright's paper forced this conclusion.

Temperature Rise In Round Ducts

Insulated ducts with an aluminum foil vapor barrier had lower exterior surface temperatures than the same ducts with duplex vapor barrier and, therefore, the heat gain to insulated ducts covered with duplex paper was more than the heat gain to insulated ducts covered with aluminums foil. The average increase at 125° ambient was 16.8% for ducts with 1-in. insulation and 10.9% for ducts with 2-in. insulation.

This was the summary of the conclusions in a study conducted by J. Richard Wright and Edward J. Brown, assistant professors at Tennessee Polytechnic Institute and University of Illinois, respectively.

Solar Radiation

For the month of June, when the reflectivity factor in solar radiation is increased by 0.15 (an increase easily achieved if the ground is changed from black with 10% reflectivity to grass of 25% reflectivity) the radiation incident upon a south facing vertical surface is increased approximately 20%. If other things remain equal, this would be avoided for summer air conditioning.

This was one of the conclusions in the paper "Daily Insolation on Surfaces Tilted Toward the Equator" prepared by Benjamin Y. H. Liu and Dr. R. C. Jordan, both of the University of Minnesota. The paper discussed a method of determining solar radiation on sloped surfaces.

WINS!

To the "BOOM" created by the original WhispAir heat pump, Westinghouse adds a new dimension. 18,000 BTU of ARI certified cooling . . . applicable for homes, motels, barber shops, drugstores . . . anywhere you need low-cost central cooling.

WhispAir is exclusive with Westinghouse . . . another first in the industry . . . an example of the leadership you can expect from Westinghouse in all markets . . . residential, industrial, and commercial. Products like the WhispAir Twins make you proud to be a Westinghouse PRO. Like to join the PROfessional team? Call or write: Don Meckstroth, Manager of Marketing, Westinghouse Air Conditioning, Box 510, Staunton, Virginia. *Trade Mark

WhispAir*

by Westinghouse

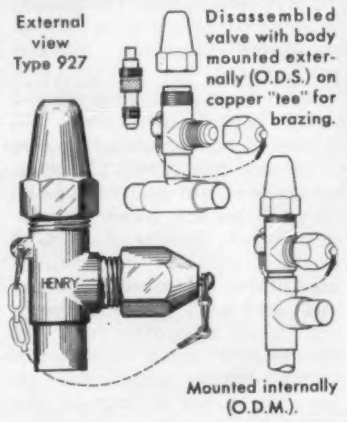
Valve Speeds, Simplifies Charging, Purging

● A new valve to speed-up and simplify charging and purging operations of refrigerant lines, or other lines containing fluids, noncorrosive to brass or steel, has been developed by Henry Valve Co., Dept. AH&RN, 3215 North Ave., Melrose Park, Ill.

"The valve has unique features," the company said. "For purging, it can be installed in the branch of a horizontal 'tee' or in the end of a vertical 'tee' located in a high point in the system. It may be similarly mounted in any strategically located position for charging operations.

"Valve inlet is machined inside and out permitting O.D.S. or O.D.M. connections. Valve is furnished disassembled so that brazing operations will not damage internal parts. Side opening has flared connection. Seal cap, with mechanically retained gasket, is chained to valve body.

"Valve is rated for 400 psi maximum working pressure and 300°F maximum temperature. Size range: bottom connection ⅜ through ⅝ in. O.D.M. and ¼ through ½ in. O.D.S. Side connections are ¼ and ⅜ in. flare, permitting use of either flexible charging hoses or copper tubing."


External view Type 927
Disassembled valve with body mounted externally (O.D.S.) on copper "tee" for brazing.
HENRY
Mounted internally (O.D.M.).

Hydronic Heating Thermostat Added

● A new room thermostat has been added to its line of hydronic home heating equipment by Taco Heaters, Inc., Dept. AH&RN, 1160 Cranston St., Cranston 9, Rhode Island.

It is equipped with a positive snap-action switch with multiple contacts, a low mass bi-metal actuator for sensitive control, and an adjustable heater for all primary control systems.

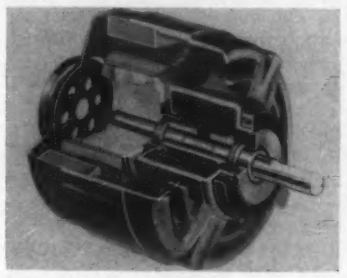
All-Angle Shaded Pole Motors Improved

● Improved 4 and 5-in. diameter, all-angle shaded-pole motors are now available from the General Electric Co., Dept. AH&RN, Schenectady 5, N. Y.

"An improved bearing lubrication system and integral insulation, among other improvements, permit dependable, continuous performance over a greatly increased motor life," according to company engineers.

These 11 and 21-frame motors are recommended for a wide variety of applications including gas-fired, steam and hot water unit heaters, unit cooler fans and blowers, exhaust and circulating fans, commercial refrigeration condensing units, deluxe space heaters, and refrigeration cabinets.

These new motors utilize a forced-feed lubrication system that constantly recirculates, refilters, and recools the oil for maximum bearing life, it was stated. The motor's integral insulation system, which utilizes a specially developed insulating resin that fuses the laminated stator core into an integrated unit, "eliminates the problem of wound-under wires, and is completely impervious to humidity," G-E said.



CUTAWAY of a typical General Electric 21-frame, shaded-pole motor.

Measures Moisture In Refrigerant Gases

● A new Meeco model W electrolytic moisture analyzer for measurement of moisture in refrigerant gases is being offered by Manufacturers Engineering & Equipment Corp., Dept. AH&RN, York Rd. and Sunset Lane, Hatboro, Pa.

"The new Type THU consists of two modules," the company explained. "The gas sampling module is thermostated and includes a vaporizing valve and oil separator with all components required for accurate moisture measurements.

"The indicating and control module may be a.c. or battery operated and it gives continuous indication of moisture in parts per million of water by volume."

Cooling Water Treatment Products Introduced

● A new line of cooling water treatment products, designed specifically to meet the needs of medium and small sized air conditioning installations, has been announced by Dearborn Chemical Co., Dept. AH&RN, Merchandise Mart Plaza, Chicago 54.

"Four of these, all in briquette form and all providing virtually fool-proof feeding and control, will go on sale immediately through Dearborn's regular sales force and through franchised engineers to be set up throughout the country," the company said.

The products, to be known as Dearborn's "Aqua-Serv" line, have been use-tested for several years in the Los Angeles area, where they were, and will continue to be, sold and serviced by Aqua-Serv Engineers, Inc., it was stated.

Aqua-Serv advantages are said to be: "Convenience of form—a briquette combination of polyphosphates, selected organics, and inhibited dry acid for precision control of scale, corrosion, and alkalinity; accurate and continuous feed—with visual control using exclusive Aqua-Serv stoker-feeders; safety—the dry acid content eliminating the hazards associated with the handling of liquid acid."

. . . I can get just the fin spacing, tonnage and CFM I want."

Now, Halstead & Mitchell gives you a choice of 6, 7, 8 or 10 fins per inch . . . makes it much easier to match a central fan-coil unit to a particular job or to meet specifications.

And look what else H&M offers: a selection of three coil face areas for each model; direct expansion or chilled water cooling coils (1 to 8 rows); hot water, standard steam or non-freeze steam heating coils (1 or 2 rows); cooling capacities of 3 to 92 nominal tons with 880 to 47,750 CFM; Turbu-Flo coils arranged for right or left-hand connections; horizontal or vertical mounting for discharge in any direction . . . and every accessory item you need to simplify your installation.

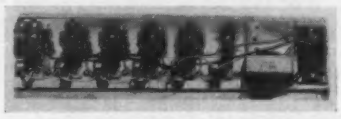
Why don't you check H&M Central System Air Conditioners? Call your wholesaler or write for Bulletin AHU-100. Halstead & Mitchell Co., Dept. H74 Bessemer Bldg., Pittsburgh 22, Pa.

Central System Air Conditioners · Air-Cooled Condensers · Cooling Towers · Water-Cooled Condensers

AH SERIES AIR HANDLER

HM Halstead & Mitchell

Electric Heating Control Uses 'Unique Approach'



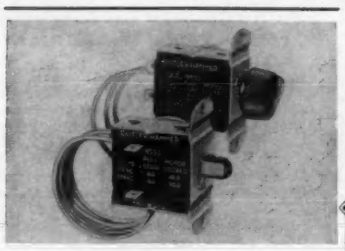
● What is described as "a unique approach to the control of electric heating, based on an orderly sequence of operation as called for by the make or break of a low-voltage wall thermostat," has been announced by the Heating & Air Conditioning Div., Controls Co. of America, Dept. AHRN, 2450 North 32nd St., Milwaukee 45.

Incorporating the approach is the new model 36 control.

"In the control, a switching circuit ties together a number of 5-kw-load modules to form a single unit," it was explained. "The modules consist of a load switch and two transfer switches that are operated by thermal expansion rods. Resulting operation is quiet, uniform, and orderly, with a time lapse of about 75 seconds between modules during the on or off cycle.

"The electric circuit is such that the current in the thermostat remains at a low uniform value to insure stable anticipation regardless of the number of heat banks in use.

"In operation, the model 36 activates or deactivates heater banks successively. A switch for the blower is tied to the first module, making the blower first on and last off. Load switches control the heat banks. One of each module's transfer switches prepares the hot rod in the succeeding module for action; the second takes the preceding hot rod load from the thermostat circuit and places it across the line."



Lower Torque, Quietness Claimed for Thermostat

● A new Bulletin 9530 straight range and constant cut-in refrigeration thermostat has been announced by Cutler-Hammer, Inc., Dept. AH&RN, 315 North 12th St., Milwaukee 1.

The thermostat is said to combine "lower internal operating forces with maximum utilization of space to provide smaller size, quieter operation, and lower knob torque. These new devices have an extensive array of adjustment and differential settings, end or side screw and end or side 'quick connection' terminations.

"The range calibration spring has been replaced by a unique system which consists of a molded drive lever, a contact reed, and a flipper spring. These elements, which eliminate high internal operating forces and offer greater operational stability against the effects of aging, vibration, shock, and shipment, form a fast make-fast break toggle switch mechanism which will not 'tease' open even when the contacts are at or near zero-force condition."

Adhesive #2 Suitable For —20°F To 200°

● An "economical" general purpose adhesive compound for a wide variety of industrial applications has been introduced by Arno Adhesive Tapes, Inc., Dept. AH&RN, Michigan City, Ind.

"Known as Adhesive #2, the compound is a red brown color and has a reclaimed rubber base," the company said. "It has an immediate grab and long tack range. The adhesive may be used in temperatures ranging from -20°F to 200°.

"Adhesive #2 may be used for bonding light and medium density glass fiber insulation to metal surfaces in furnace, air conditioning, and duct applications."

MORT CLARK'S **GALV-WELD** ALLOY ORIGINAL & GENUINE

Solves corrosion problems in outdoor cooling towers, ductwork, etc. Dominate your market by selling trouble-free, all-galvanized structures with Galv-Welded joints. Write for details. Free sample.

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New Milk Cooler Line Announced

● A new line of milk coolers has been announced by Powers Equipment Co., Inc., Dept. AHRN, 458 Oakdale Ave., Hatboro, Pa.

The coolers are available in two sizes and with either stainless steel or see-through plastic glass lids. Designed for cafeterias, schools, and similar mass-feeding installations, these coolers provide high capacity in small floor space, according to the company.

'Hi-Jack' Lifts 500 lbs at Rate of 3 ft per Minute

● The Vermette "Hi-Jack" lifts bulky loads ceiling high or roof high in a matter of minutes, making it especially useful for installing air conditioners and heating units, and for handling other similar tasks, according to Vermette Machine Co., Inc., Dept. AH&RN, No. 7 143rd St., Hammond, Ind.

"One man and a single Hi-Jack can lift 500-lb loads up to 15 ft at a speed of about 3 ft per minute," the company claims. "With two Hi-Jacks (and pipe extensions slipped either through or over the platform prongs) loads of 2,000 to 3,000 lbs can be handled. When Hi-Jack is equipped with wheels it can serve as a lift truck.

"The Hi-Jack is maneuverable in close quarters and can be taken down or assembled as simply as an Erector set. The heaviest part, or base, weighs but 40 lbs. Heavy-gauge supporting standard comes in sections to accommodate any ceiling height or job condition.

"Unit may be fitted with ceiling stabilizer or with wall stabilizer, to increase its load-carrying capacity. Where extra stability is needed, 1¼-in. 'outrigger' pipes may be inserted in the base tubing and allowed to project out beyond it so as to widen the base support."

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AQUATROL can pay big dividends in time and dollars! Sell AQUATROL with your next water tower installation!

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Cites 'Weaknesses' of Voluntary Code

AFDOUS Accepts 'Zero Degree' Frozen Food Handling Code with Minor Changes

WASHINGTON, D. C.—Members of the Association of Food & Drug Officials of the United States, at their annual conference here, adopted a report of the Canned, Processed, and Frozen Food Committee recommending acceptance of the AFDOUS "zero-degree" Frozen Food Handling Code with some minor changes.

The code is not a law but a guide which states can use in drafting their own regulations if they so desire.

It puts the maximum temperature for frozen food handling at 0°F, at all stages, with a 10° tolerance.

The AFDOUS committee commended the Frozen Foods All-Industry Coordinating Committee for its recently-announced Voluntary Operating Practices. However, it said a voluntary self-policing program of the industry is no substitute for the AFDOUS code.

Major faults in the industry's program, the AFDOUS report asserted, are the 20° tolerance for delivery trucks and the provision that transportation equipment purchased after March 1, 1961, should be capable of achieving only 5° instead of 0°.

It was recommended that the matter of developing bacterial limits for frozen foods be referred to a subcommittee of microbiologists.

Main changes in the code pertain to warehouses. They provide for an "air" rather than a product temperature of 0° in storage rooms and increase from 12 in. to 18 in. the clearance of stored product from warehouse ceilings.

Commenting on the AFDOUS code report, the National Association of Refrigerated Warehouses, one of the members of the FFAICC, noted that in a drive to avoid having the code adopted as regulation by states or cities, FFAICC is proceeding with an educational program to acquaint all frozen food handlers with the provisions of the voluntary practices and to impress upon them the importance of observing these practices.

"There is no better insurance against compulsory regulation," the NARW said, "than a sound, universally adopted voluntary program such as that developed by FFAICC."

Text of Retail Sections of AFDOUS Code

1. EQUIPMENT:

A. Each storage facility shall be equipped with suitable mechanical refrigeration capacity to maintain, under extreme outside temperature and peak load conditions, a product temperature of zero degrees Fahrenheit, or lower, for frozen foods stored therein.

B. When storage facilities of the cabinet type are used:

(1) They shall be defrosted as frequently as necessary to maintain refrigeration efficiency specified; and

(2) They shall be equipped with an accurate thermometer indicating a representative air temperature.

C. When back-room storage facilities of the walk-in freezer type are used:

(1) Frozen foods in storage shall be on pallets, racks, or skids, and shall be stored no closer than 18 in. to the ceiling and otherwise stored so as to permit free circulation of refrigerated air.

(2) They shall be equipped with an accurate thermometer, the sensing element of which shall be located within the upper third of the distance between floor and ceiling. Said sensing elements shall not be placed in a direct blast of air from cooling units, cooling coils, and heat exchange devices, or near the entrance door; and

(3) They shall be equipped with an automatic mechanism for defrosting refrigerated coils when forced air blower type of refrigeration is used.

D. All frozen foods display cases shall be designed, constructed, and equipped with mechanical refrigeration facilities capable of maintaining a product temperature of zero degrees F, or lower.

E. Frost on refrigerator coils and in air passages of display cases shall be removed as frequently as necessary to maintain refrigeration efficiency specified in subsection H. 1. D.

F. Each display case shall be equipped with an accurate thermometer, the sensing element of which shall be located in an appropriate place within the path of refrigerated air being returned to the coils.

G. The product load line shall be designated by a distinctive line at inside terminal ends of each display case, and such lines shall be at the highest point of discharge and return of refrigerated air.

H. Each display case shall be equipped with separators to provide false walls located a minimum of ½ in. from terminal ends to provide for free circulation of refrigerated air between said terminal ends and displayed product.

L. All display cases in a retail outlet shall be so placed as to be relatively free:

(1) Of air currents resulting from door drafts, electric fans, and other factors that adversely deflect the current of refrigerated air within the display case; and

(2) Of heat elements such as lights, heating units, and related devices that tends to raise the temperature of refrigerated air within the display case.

2. HANDLING PRACTICES:

A. Frozen foods shall not be accepted for delivery by a retail outlet when the internal product temperature exceeds zero degrees F, when determined in accordance with Section B. 1. B. of this code, except as provided in Section +B. 1. A. and B. 1. B. of this code and such exception is duly recorded.

B. All frozen foods received at a retail outlet shall be immediately placed in backroom storage facilities, or in display cases.

C. Each retail outlet shall be equipped with storage facilities of sufficient cubic displacement to accommodate the storage of those frozen foods that are not placed directly in display cases at time of delivery.

D. In no instance shall frozen foods be placed above the designated product load lines with resulting obstruction of the normal flow of refrigerated air within any display case.

E. All frozen foods in a retail outlet shall be held, stored, and displayed under good sanitary conditions so as to avoid any contamination of product.

F. All retail outlets shall employ the first-in first-out basis of inventory control.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Jamison Opens New Midwest Sales Office

HAGERSTOWN, Md. — Midwestern users of its refrigeration doors for industrial, institutional, and commercial applications will be served from Kansas City, Mo., by a new midwest sales office of Jamison Cold Storage Door Co. here.

Establishment of the Kansas City office signals the enlargement of Jamison's midwest sales territory. Local telephone service will be maintained in St. Louis and Omaha to permit rapid contact with the midwest representative, the company said. Former headquarters were located at Omaha.

The Kansas City headquarters will be situated at 322 Ten Sixteen Baltimore Building, Kansas City 6, Mo.

A. C. Hoffbauer, district manager, will be responsible for sales and service of products including automatic electric refrigeration doors, conventional and lightweight plastic doors, flexible reinforced rubber doors, and newly-developed air curtain closures.

Another big Sales-Case "Hidden Feature!"

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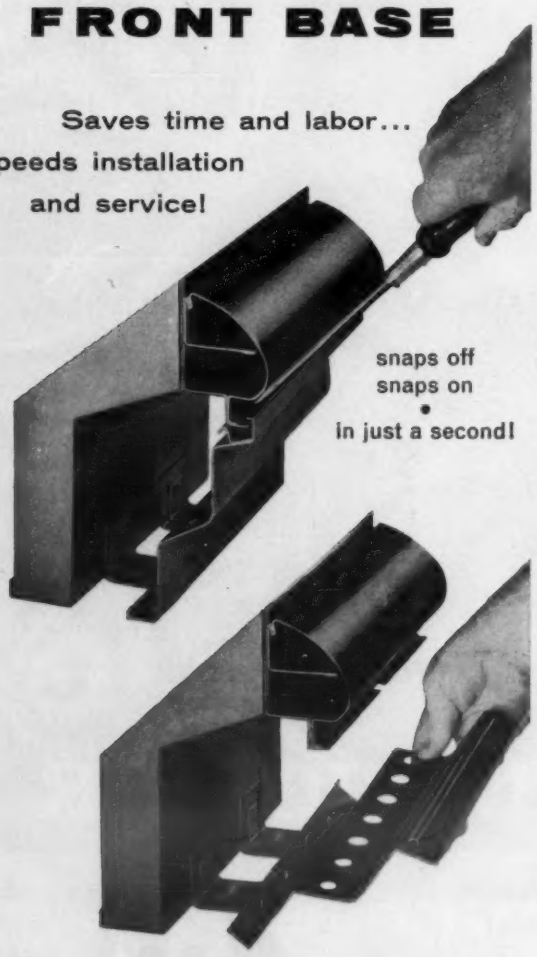
Saves time and labor... speeds installation and service!



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Tyler provides easy access to extra-large utility area for fast installation of drain and refrigeration lines. Porcelain bumper guard serves as double electrical raceway for wiring simplicity.

Tyler opens new profit opportunities to aggressive, well-rated commercial refrigeration organizations. Write today.

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Send details on ☐ Tyler Distributor Franchise Program ☐ Sales-Cases ☐ Air-Skreen® Sales and Storage Coolers ☐ Condensing Unit Assemblies ☐ Shelving ☐ Checkouts ☐ Reach-Ins ☐ Storage Freezers ☐ Walk-In Coolers ☐ Rolling-Cold Packaging Conveyors.
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TYLER REFRIGERATION CORPORATION, Niles, Michigan
Canada: Tyler Equipment Sales Ltd., 732 Spadina Ave., Toronto, Ont. (Export: Tyler Refrigeration International, C.A., Apartado Postal 9262, Caracas, Venezuela, S. America).

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The power-packed *round* coil of improved evaporator design is ideally suited for use in soda fountains, direct draw bars, reach-in refrigerators and similar cooling applications. It has all-aluminum casing and brackets; aluminum fin surface on copper tubing; oilless fan motor. Available in three sizes, with or without drain pan. Write for detailed information.

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Leading Pharmaceutical Firm Makes Extensive Use of Walk-Ins In New Manufacturing Plant

PAOLI, Pa. — Wyeth Laboratories, Inc., one of the world's leading pharmaceutical firms, uses walk-in refrigerators extensively at its new drug manufacturing plant near here.

A portion of the modern building is one-story, while the balance is two-story, with total floor space being approximately 565,000 sq ft.

There are a number of uses for insulated walk-ins in this building, and seven sectional all-metal walk-ins have been installed by Bally Case & Cooler, Inc.

INTERIOR VIEW of the Bally walk-in used in the Wyeth warehouse. Note the automatic sprinkler system along the ceiling.

One is used in the quality control laboratory where manufactured products are put through a series of tests which involve keeping them at constant temperatures for specific periods of time.

Another walk-in is used for the storage of bulk raw materials used in manufacturing. Two are used by the Product Development Unit in part of the company's research and development on new drugs.

"Probably the most impressive of all the walk-ins installed," Bally reported, "is the giant 60-ft wide, 80-ft long and 10-ft high walk-in located in the warehouse in which finished drug products are stored at a 45°F. temperature. This walk-in contains 46,340 cu ft of refrigerated storage space. It is easily accessible through an electrically operated double door which permits fork lift trucks to move from the warehouse into the walk-in."

Two more walk-ins are located in the cafeteria kitchen. One operates at normal temperature for the storage of fresh meats, dairy products, and vegetables; the second one is for low temperature storage of frozen foods. These provide ample space to store the large quantity of food needed to serve 750 people per meal.

In addition, these walk-ins also store food which is served in a canteen located in another part of the building.

All the walk-ins were designed for Wyeth's particular requirements by the engineering department of Wyeth Laboratories, in conjunction with the engineering department of Bally Case & Cooler.

ARI Publishes New Standard for Variable Speed Transport Units

WASHINGTON, D. C.—A new ARI standard (1120-61) for variable-speed transport refrigeration units employing forced-circulation air coolers, such as are used in refrigerated trucks, trailers, and railroad cars, has been published by the Air-Conditioning & Refrigeration Institute.

The new document is a companion to "ARI Standard 1110-59, for Speed-Governed Transport Refrigeration Units Employing Forced-Circulation Air-Coolers." Both were published at the direction of ARI's Mobile Refrigeration Section.

The new standard applies to units intended for high-temperature (25°F or above) and/or low-temperature (10° or below) service. It establishes a specification of what constitutes minimum standard equipment; rating requirements; methods of testing; and proper marking for the equipment covered in the standard. It does not establish minimum specifications for, nor means for determining rating of, refrigerated vehicles, the ARI noted.

While conformance with the Mobile Refrigeration Section's Standards is completely voluntary, the ARI, as publisher of the standards, stipulates that "equipment represented as being in accordance with this (these) standards shall conform to all the provisions thereof."

The Mobile Refrigeration Section has under consideration an ARI certification program for transport refrigeration equipment, similar to the unitary air-conditioner certification program now in effect. Should such a program be adopted, the two existing ARI standards for this type of equipment would form its basis.

Copies of the new standard are available from ARI, 1346 Connecticut Ave., Washington 6, D. C., at 75 cents each, it was pointed out.

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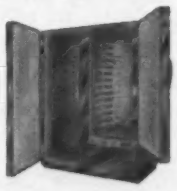
Westra Is Zone Mgr. For G-E Water Coolers

CHICAGO—The appointment of Robert A. Westra as zone manager for water cooler sales has been announced by Leonard Smith, manager of marketing for General Electric Co.'s Commercial Equipment Dept.

Westra's territory encompasses the key Chicago, Tennessee, and Rocky Mountain trade areas. Prior to joining the Commercial Equipment Dept., Westra was manager of employe relations for the company's Hotpoint Div.

BAKER'S FREEZER



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Wholesaler Inquiries Invited — Standard Trade Discounts

Queen Products Names New Advertising Agency

ANN ARBOR, Mich. — Ross Roy - BSF&D, Detroit, has been selected as its advertising agency by Queen Products Div. of King-Seeley Thermos Co.

The appointment, effective July 15, was announced by Truman Stone, advertising manager of King-Seeley Thermos Co. here. Located in Albert Lea, Minn., Queen Products manufactures "Scotsman" automatic ice machines and also "Almco" deburring and metal-finishing equipment and metal-finishing media.

RECOLD'S NEW CARCASS CHILLER, designed specifically for installation in meat packers' carcass chilling rooms, are shown in Commercial Cold Storage, Inc. warehouse in Atlanta. The chillers are available for recirculating and flooded ammonia units with hot gas and water defrost, and for R-12 and R-22 with water defrost.

Atlanta Cold Storage Facilities Require Expansion After 1 Year

ATLANTA—The modern 30,000-sq ft cooler and freezer of Commercial Cold Storage, Inc., here has required a substantial space expansion barely a year after going into business.

The plant has operated at capacity virtually from the start. Plans call for an additional 15,000 sq ft in capacity within 12 months.

Commercial Cold Storage uses 12 Recold A-1500 ammonia ceiling units in two 38° coolers covering 15,000 sq ft. A 13,000-sq ft holding freezer is handled by eight Recold A2900FG flooded ammonia hot gas defrost units. A DF-39A Recold "Dri-Fan" evaporative condenser is employed to maintain condensing temperatures with little fluctuation.

B. C. Simpson, president of Commercial, announced an expansion program of 15,000 sq ft of freezer space would be started in the near future.

The freezer room units are automatically defrosted with hot gas. Industrial Refrigeration Co. was the contractor, according to the announcement.

The firm stores all types of products. One feature of the facility is a battery of electric doors leading to both rail and truck platform.

'Frozen Food City'

Multi-Million Dollar Processing, Warehousing, Distribution Center To Serve N. Y. Area

SECAUCUS, N. J. — Trans-American Refrigerated Services, Ltd., a national network of independent refrigerated warehouse companies, announced that one of its members, Merchants Refrigerating Co. of New York City, recently opened its new "Frozen Food City" here.

Frozen Food City, an ultra-modern processing, warehousing, and distribution center, began operations for its customers during the latter half of June.

Business activities at this multi-million-dollar center actually began in mid May. Frozen food products started rolling by truck and rail into the huge freezer storage rooms from which orders are made up for distribution to food outlets throughout the New York metropolitan area.

The center has 3,100,000 cu ft of warehouse space all on one level, spacious parking and maneuvering area, and adjacent acreage available for processors' plants. The first frozen food processor to locate at Frozen Food City is the Chock Full O'Nuts Corp., whose new plant is now under construction.

"Frozen Food City" the announcement said, "has been designed to utilize the latest equipment, both mechanical and technological, in its efficient transfer of products, kept under controlled temperature at all times. A 1,400-foot towline system has been installed by Mechanical Handling Systems, Inc., providing fully automated transfer of product from truck and rail docks to predetermined stations within the warehouse.

"Freezer room temperature is constantly maintained at -10°F. by the latest Niagara 'No-Frost' method, under fully automatic control. The entire truck platform is enclosed and refrigerated and ten of the 41 truck loading doors have hydraulically operated adjustable platforms.

"Frozen Food City is served by a mainline of the Erie-Lackawanna Railroad. Rail cars are unloaded at an enclosed, refrigerated platform containing six car unloading doors."

Merchants Refrigerating has appointed William R. Lockwood as manager of the new operation. Lockwood formerly served as manager of the Frozen Food Service Div. at Merchants' Tenth Avenue warehouse in New York City, and also as vice president and general manager of Howell Trucking Co., Inc., a Merchants subsidiary, in which capacity he will continue.

Buffalo Firm To Sell, Install, Service Complete Line of Food Store Equipment

BUFFALO—Jerome L. Naab and Mel R. Rosen of Buffalo, president and secretary-treasurer, respectively, have announced the formation of a food store equipment and planning corporation.

The new corporation, Food Store Refrigeration & Development Co., Incorp., will sell, install, and service a complete line of food store equipment and fixtures to supermarkets, chain stores and independent food stores in the Rochester, Syracuse, and Buffalo areas, it was stated.

The company also offers complete store planning service in addition to refrigeration equipment, check-out counters, scales, display cases, shelving, meat tracking systems and cutting equipment, and all other food store fixtures.

The company is negotiating for office space in Rochester and Syracuse but for the present will maintain offices at 77 Broadway in Buffalo.

Naab is a former vice president and sales manager of the T. A. Buscaglia Equipment Co. of Buffalo.

Rosen is also president of Store Fixtures Sales of 77 Broadway, Buffalo.

The new corporation will utilize the services of the engineering department of Store Fixture Sales, which is under the direction of Ted Overhoff, store planning engineer.

The corporation also will have woodworking shop at its disposal for the construction of custom-made fixtures.

Military-Industry Conference Topic To Be Freeze-Dried Foods

CHICAGO — Speakers at a military-industry conference to be held at the LaSalle hotel here Sept. 26-27 will discuss the status of commercial and military freeze-dried foods and flexible packaging methods.

Recent technical information on freeze-dried and other processed foods in the U. S. and Europe will be reviewed during the conference sponsored by Research & Development Associates, part of the Food & Container Institute of Chicago.

Representatives from Continental Can Co., Swift & Co., Reynolds Metals Co., Food Machinery & Chemical Co., and the Food & Drug Administration are tentatively scheduled to address the conference.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

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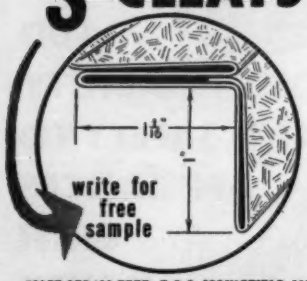

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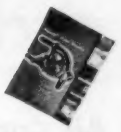

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'Unconventional Approach'

Customer Convenience, Rather Than Rate Of Profit, Determines Product Location

PEKIN, Ill. — What is described as a "new, unconventional approach to supermarket department and merchandise grouping, with refrigerated cabinets playing an integral part," is reportedly receiving a highly favorable reception by customers at Vogel's Supermarket here, and creating marked interest among other operators.

Departments

Basic principle of the system is the grouping of foodstuffs of the same general category in one department — regardless of whether they are canned, bottled, dry, or frozen food.

Underlying this premise, which was instituted in February, when expansion work doubled Vogel's floor space to 14,000 sq ft, is total customer convenience as the ultimate aim, according to a report by Universal Cabinet Div., Universal Metal Products Corp.

Thus, a customer at Vogel's will find six main food departments—meat and fish, produce, bakery, dairy, fruit and vegetable, and beverage—each containing related canned, packaged, boxed, bottled, and frozen foods and beverages, as opposed to the usual stocking of canned goods of all categories in one area, or frozen foods of all types in one bank of refrigerated cabinets, and so on.

Spaciousness, Accessibility

Another facet of this concept is spaciousness and easy accessibility, eliminating the familiar long rows of merchandise shelves without breakthroughs, it was pointed out. This is achieved by arrangement of the various departments in U-shaped, wide-mouthed bays, all opening into a center aisle wide enough to accommodate two automobiles abreast.

"The usual supermarket technique," explained Virgil Vogel, Jr., operator of the market, "is to corral people to high profit items. We contradict this by trying to make it as easy for customers as we possibly can by putting things where they belong—not where we feel we'll make the most money.

"We believe that in the long run, we'll show an even greater profit, and our experience so far would appear to bear this out.

The Vogel market is one of the largest in the Pekin-Peoria area and has occupied its present site since its establishment 27 years ago by Vogel's father.

A key to the extensiveness of the unorthodox system, according to Vogel, are 13 refrigerated display cabinets, comprising three different models from the line of the Universal Cabinet Div.

10 New Cabinets Aid Departmentalizing

These cabinets are spotted in two's and three's in the bakery, fruit and vegetable, dairy, and beverage departments. Three of them were installed by Vogel a few years ago, but the additional 10 were ordered last November expressly for the new department plan.

The cabinet supplier, Cecil E. Krug of the Big 4 Supply Corp., worked closely with Vogel in planning the unusual use of the refrigerated units. Krug's company, with offices in St. Louis, is distributor in a five-state area for the Universal line.

Frozen Juices Are With Other Beverages

In the Vogel-style beverage department, the customer finds on the shelves all types of powdered drinks, canned juices, coffee, tea, bottled and canned soda. In addition, in two new AG-70 model cabinets located side by side in the department, are a full range of frozen juices and other beverages.

In the fruit and vegetable department, where five of the new refrigerated cabinets are located, Vogel has included a categorization within a categorization.

In this department, one group of three AG-7 model cabinets provides a selection of prepared frozen foods. On the shelves above and adjacent to the cabinets are packaged and canned prepared foods.

IN THE FRUIT AND VEGETABLE department at Vogel's supermarket in Pekin, Ill., are five of the 13 refrigerated cabinets which form an integral part of the unique system of grouping together all merchandise of the same category, regardless of whether packaged, canned, or frozen.

In another section of the same department, the other two cabinets, Universal AG-70 models, offer frozen fruits and vegetables. Adjacent to the cabinets, a full array of canned fruits and vegetables is available.

Supplementing the expected selection of breads, cakes, doughnuts, cookies, pies, and rolls of the bakery department is a full line of frozen pies, cakes, muffins, and similar baked goods, displayed in a group of three AG-70 cabinets.

The three older cabinets, AD18-7's, form a bank in the store's dairy department, providing a selection of ice cream, sherberts, and other frozen desserts to go along with the array of shelved candies, confections, and such complementary items as candies, confections, ice cream syrups, and nuts, as well as the standard dairy products.

The Vogel departmental plan incorporates still another department, a non-food section which stocks the wide selection of dissimilar items found in most supermarkets today.

While Vogel's new approach to departmentalizing began in full swing just a few months ago, Vogel says his market actually initiated it some three years ago by locating refrigerated cabinets containing frozen vegetables in their fresh vegetable department.

He said this proved popular then and adoption of the same technique throughout the store was held up only in anticipation of the store's recent enlargement.

It was with the departmentalizing in mind, he added, that much of the planning for the expansion was carried out. He said the bay idea dictated placement of all wiring on outside walls, spotting of drains to serve the bays, and of electrical outlets to provide close and direct plug-in for the refrigerated cabinets. All of these things together, he said, also add up to great flexibility.

Idea Declared 'Total Success'

"We can only look upon the whole idea as a total success," he said. "We have not had a single complaint, even though it meant confronting our established customers with a largely unfamiliar new pattern of stock placement. We've had many favorable comments on the ease with which people can shop with the new arrangement."

Partnership Formed

KANSAS CITY—Carl E. Corbin, Leawood, has announced the formation of a partnership with his son, Carl E. Corbin, Jr., as manufacturers' representatives in the institutional field for a four-state area. Manufacturers represented include Koch Refrigerators, Inc.

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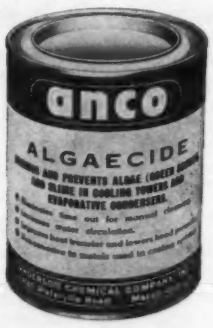

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TECH CENTER

by FRANK J. VERSAGI

The Role of the Engineer In the Future of Air Conditioning (2)

(From a talk before 68th annual meeting of ASHRAE, Denver)

Noise, air movement, odor control, humidity, sizing of units, performance, reliability, all of these are engineering problems. Design engineering, production engineering, application engineering problems.

Rebuttals Form Pattern

I have raised these points with some of you in individual conversations. Your rebuttals form a pattern.

First, these are old problems. They'll always be with us. To which I say this is an odd way for an engineer to talk. A problem, old or new, is for solving, and you're the qualified ones. *You can't let George do it because you're George.*

Second, I am frequently told, "Well, we're working on these things, they take time." Having been in industry, I know you don't solve a problem with a snap of the fingers. But also having been in your laboratories and your model shops and having looked over your shoulder at your drawings, I bet my easy job that the average cooling engineer spends 98% of his engineering time deciding whether to use chrome-plated metal or metallized plastic for a control knob; deciding whether the receiver should be moved two inches to the left; making his compressor apparently different by calling for another 100 turns of wire on the stators.

Third point in the pattern of rebuttal is that as engineers you must be careful not to become commercial, that professional integrity does not permit you to get too close to the consumer.

Let me tell you what this sounds like to me. It sounds like moral evasion. It sounds exactly like the scientists who developed the atomic bomb disclaiming responsibility for its use. One scientist, I recall, said: "An atomic bomb in the hands of St. Francis of Assisi would pose no threat to mankind. We developed the bomb. Society must decide what to do with it."

Well, St. Francis isn't around any more, fellows. These scientists who know most about nuclear physics, about radiation, refuse to take a stand. But a few do. Pauling, Schweitzer, Oppenheimer. In his own way, scientist-novelist C. P. Snow preaches the moral and social responsibility of science.

Now, the growth or not of air conditioning will not mean the difference between saving and destroying civilization, but the moral principle is the same.

Professional integrity cannot exist in a vacuum. For what purpose do you exercise your God-given engineering talent if not to benefit the consumer? If you fear prostituting your integrity to commercialism, what can be more commercial than spending a lifetime designing dodads, undersizing a job to help get a sale, oversizing an installation because you have a rich customer on the hook.

Each Has Obligation

My point is this, gentlemen, each of us here has an obligation to society; an obligation which he can justly serve through our industry. And our industry has problems. Warranties, certification problems, licensing and codes. If you engineers don't help solve these problems, who will.

Warranties, for example, are directly dependant on the reliability you can design or build into a system. If you honestly feel that a five-year warranty is unrealistic, say so. If you are convinced that your equipment can stand behind such a warranty, speak out.

Certification. Does unitary equipment need certification? Does it pay to certify unit capacity when there is evidence which indicates that the average installed unit delivers only about 7/10 of its capacity due to poor installation. Should the installation rather than the unit be certified?

Engineers Shouldn't Leave Decisions to Sales, Ad Managers

You gentlemen have more pertinent knowledge on these matters than anyone else. Don't leave all such decisions to the vice president in charge of sales and to the advertising manager. If you don't make known your authoritative opinion, aren't you neglecting your professional obligation?

I recall attending an ASHRAE chapter meeting in which the majority in attendance were incensed over a recent city decision which liberalized control over refrigeration and air conditioning installations. The group was prevented from voicing an official objection, I understand, by ASHRAE by-laws which forbid this kind of activity.

Too commercial? I think that's open to question. If you avoid all discourse which seems to have commercial implications you will lose any effectiveness you have by default, both as individuals and as a respected society. The discussion on central vs room units which is to follow here will undoubtedly have commercial overtones. Does that invalidate the opinions expressed? Not at all. At least, not all of them.

Let me leave you with these thoughts.

First, the future of air conditioning is as much in your hands as it is in the hands of your sales manager.

Second, the apparently petty problems or noise, odor, drafts realistically fall in your domain. You know the official ASHRAE definition of total air conditioning. Can't we have control of temperature, humidity, dirt, air movement without such complex systems that we need a resident service man. Consider the unorthodox. To revert to our color TV example, a single-gun banana tube out of England offers the possibility of replacing the present three-gun picture tube. To get the color effect, the banana tube inventors are using moving optical system. Till now, moving parts have been unthinkable in such electronic appliances.

Third, on more public problems, like warranties and certification, does your role as a professional really necessitate your remaining silent either as an individual or as a society. Is there really a difference in kind or only in degree between your sponsorship of the ASA B9 code and your taking action for or against local codes which can affect the safety and comfort of the public.

Fourth. Develop within yourselves and promote externally the idea of open and frank discussion of engineering differences. At ASHRAE forums, by letters to the Editor, by publishing papers. And don't always pick safe subjects. How badly we need for example open, industry-wide engineering-level discussions of heat pump cycles, of the role of Underwriters' Laboratories in the industry, on the effect of chemical additives in refrigeration cycles, on air handling problems, on coil freeze-ups. How much we need reliable data unslanted for public relation purposes, on total operating and owning costs of gas and electric air conditioning.

The opportunities for service to your industry and to the public are there. You can help create the desire for air conditioning by solving some of these problems which the potential customer offers as real objections. Sure, something spectacular may come along and remove all these obstacles, but it is more likely that sound research and development on your part will create the products and technology which will obviate present criticism of air conditioning.

Problems, you know, are not obstacles. They are stepping stones to progress.

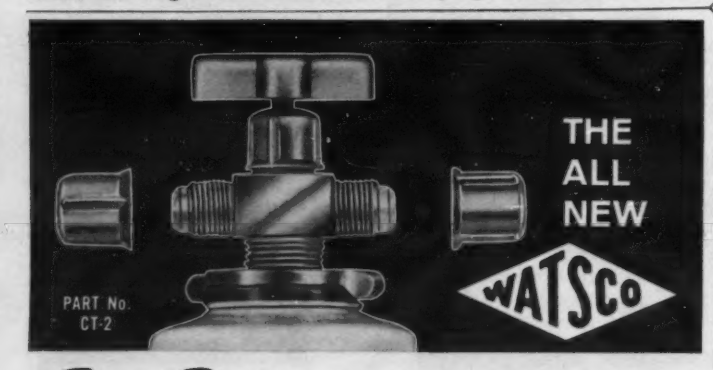
And a journey of a thousand miles begins with a single step.

And you have taken that first step if you recognize that the future of air conditioning is in your *minds, in your well-trained engineering minds.*

On the Cost of Mylar Motors

"In your June 19 discussion of "Mylar" and alcohol, you indicated that although Mylar costs more per unit than cellulosic materials, handling is so much more efficient that the total assembly costs of a Mylar motor is less than its cellulosic counterpart. This has not been our experience; we find that the total cost of a Mylar motor is definitely more than that of a cellulosic motor."

Motor Manufacturer



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Solve automatic control problems faster . . . more efficiently

Here is a book that shows you how automatic control works in a heating or air conditioning situation . . . gives you information that you can apply in designing, installing, or servicing heating or cooling equipment. Avoiding analysis by mathematical formulas, this book shows you the **basic** problems likely to arise in various heating and air conditioning systems, and then gives you the **basic** principles for solving them. This is a practical book that takes you logically from means of measurement and means of actuation . . . through construction and characteristics of control devices . . . to the combination of individual devices into control systems.

A guide to

- **basic principles**
- **basic problems**
- **how control devices operate**
- **how to combine control devices into systems**

AUTOMATIC CONTROL of HEATING and AIR CONDITIONING

By JOHN E. HAINES

Vice-President, Minneapolis-Honeywell Regulator Company

354 pages, 6 x 9, 200 Illustrations, $6.75

CONTENTS

1. Fundamentals of Control
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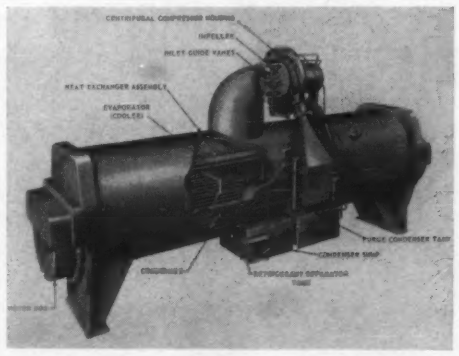


CUTAWAY shows construction of "Packaged Tonrac" centrifugal refrigeration machine. Liquid from air conditioning units enters finned tubing in cooler where liquid Refrigerant-11 is at 35°F. Refrigerant absorbs heat, boils, and rises as vapor. Compressor draws vapor through impeller, raising pressure and temperature; refrigerant gas is delivered to the condenser, where it turns to liquid and drains to the sump where it is at 26 psi and 103°. A float valve in the sump regulates flow of liquid refrigerant to a horizontal distribution header in the cooler; the header connects to a series of distribution pipes which spray the high pressure liquid at high velocities throughout the cooler. The liquid refrigerant boils in the lower pressure atmosphere of the cooler (approximately 6½ psi); the heat required for the boiling action is taken from remaining refrigerant which is cooled to 35° and which in turn chills the liquid passing through the finned tubing.

American Standard -

(Continued from Page 1)

claim that it takes only a little more than half the floor area of similar machines of comparable capacity.

The Packaged Tonrac is available in eight size increments from 50 to 100-ton nominal refrigeration capacity. The packaged design is completely piped and factory insulated; it requires no auxiliary water piping, refrigerant piping, or control tubing installation on the job site.

Basic Components

Basic components include a centrifugal compressor with its electric drive motor, a heat exchanger section consisting of condenser and cooler portions plus necessary piping, valves and controls.

The separate motor-generator-exciter power unit need not be located adjacent to the refrigeration machine. However, on the basis of present experience in the transmission of the 300-cycle current, it is thought best that this power line be not more than 160 ft long. The power unit should be protected from the elements.

The power unit generator can be operated from any rotary prime mover, a point of considerable value in areas where steam or natural gas are less costly than electric power. This also permits use of steam turbines or internal combustion engines as stand-by power sources in the event of an electrical power failure.

Liquid-Refrigerant-Cooled Motor Design

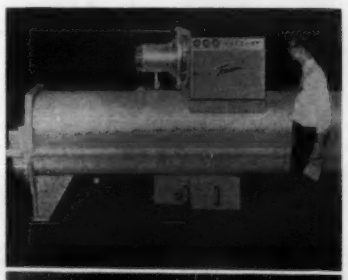
Another design achievement incorporated in the Tonrac is the liquid - refrigerant - cooled electric motor that drives the centrifugal compressor, a patent-applied-for design. In the 100-hp size, say American-Standard officials, it weighs less than one-tenth as much as any electric motor of comparable capacity commercially produced today.

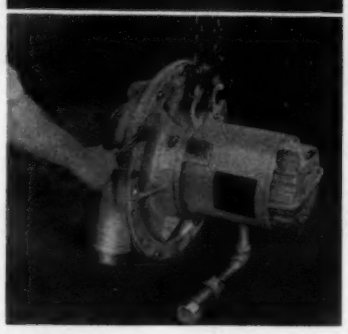
Also contributing to size reduction, say company officials, is a design innovation that combines the condenser and cooler in a common shell or housing. The Tonrac design retains the conventional heat exchanger elements, but puts the cooler on top and the condenser on the bottom and makes one shell serve both portions. Condenser is separated from the cooler by a pair of leakproof divider plates having a gas space between them to insulate one portion from the other.

Total packaged weight of the basic Tonrac unit, including power unit, is 6,700 lbs, and American - Standard officials claim that a conventional centrifugal system of comparable size would weigh at least half again as much.

All parts of the centrifugal compressor are aluminum with the exception of guide vanes and vane operating arms. In the guide vane assembly the vanes are turned by operating arms in response to a signal from the controller which senses water temperature leaving the cooler. Vanes perform a dual role: (1) they pre-rotate gas into the impeller and (2) they regulate gas volume delivered to condenser for modulating capacity control.

Motor cooling with refrigerant is accomplished by admitting Refrigerant-II from the condenser sump into the low pressure motor housing atmosphere. Change of state from liquid to vapor at the motor windings permits the refrigerant to absorb all heat generated within the motor. Because the bearings are cooled by the motor cooling system, there is no need for a separate oil cooler.





(ABOVE) Compactness is a prime feature of the Tonrac. Available in capacities from 50 to 100 tons, every unit can pass through a standard commercial 36-in. doorway.

(BELOW) The 18,000 rpm motor for the machine has a unique liquid-refrigerant-cooled design for which patents have been applied. This design is said to dissipate all heat generated within motor housing so effectively that the motor could be designed with complete disregard for heat generation problems.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Integral 'Compressorless' Purge System

Another feature of the system design is the integral "compressorless" purge system. General practice in such systems is to use an auxiliary reciprocating compressor to handle purging of foul gases (air-water-refrigerant mixture) that accumulate in the condenser portion of the heat exchanger during normal usage. This arrangement generally calls for the use of an oil separator also.

In the Tonrac the pressure differential which always exists between the condenser and cooler is utilized to exhaust foul gases from the condenser.

The Tonrac is furnished with factory - installed insulation, which blankets the complete packaged unit, including the water boxes. The only water piping required on the job is that for the air conditioning load and that from the cooling tower to the condenser.

In a press conference marking the introduction of the Packaged Tonrac, engineering and sales officials of the American-Standards Industrial Div. answered questions about the new product, and some of the more significant facts developed from this included:

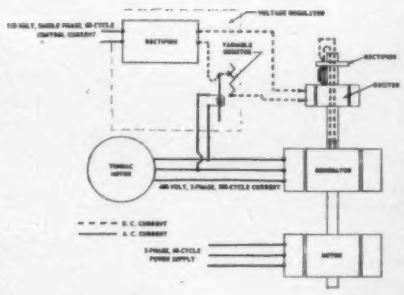
The high speed drive will not in itself bring about greater wear and shorter life, declared the engineers. Centrifugal compressors of similar design, although much smaller in size, have been operating for some years at higher speeds with no sign of a high failure or breakdown rate. Also, the operating speeds on vital wearing surfaces are considerably less, and in the motor itself the smaller bearing surfaces should tend to promote longer, not shorter life.

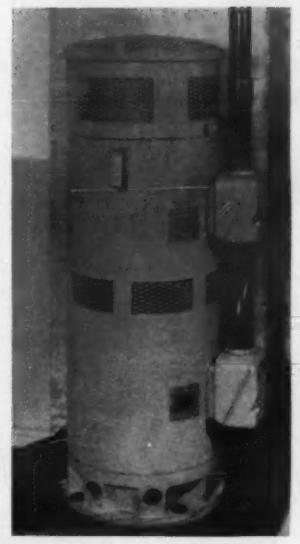
Prices Currently Higher Than Reciprocating Units

For the present, prices of the Tonrac will probably range somewhat higher than chillers of comparable capacity which use reciprocating compressors, said marketing officials. This gap should narrow with increased production schedules, it was indicated. Orders are now being taken on Tonrac machines, and delivery schedules are expected to be maintained on a regular basis before the end of the year, it was indicated.

Two Tonrac units can be used with a single power unit, and American-Standard will recommend that where there may seem to be need for future expansion of capacity, that the power unit of sufficient size be installed to handle the addition of a second centrifugal machine.

The Packaged Tonrac is not presently recommended for operation at capacities lower than 50 tons, because it would not operate efficiently below that figure. With the modulation of capacity through reduction of gas flow from the compressor, there is some loss of compressor efficiency which is balanced by other gains in efficiency through other parts of the cycle, but only through about a 50% reduction in capacity.





STANDARD POWER UNIT (right) is electric motor generator set plus an exciter, which produces 480-v, 300-cycle, 3-phase current. Gas or steam turbine or internal combustion engine can be coupled to generator and exciter.

Schematic diagram (above) shows power unit wiring and Tonrac motor voltage control. All power unit components are mounted on common shaft; this eliminates need for brushes, slip rings, commutators, etc. 115-v 60-cycle single-phase current enters the rectifier which change it to d-c current for the stationary exciter field; the rotating exciter armature generates a-c current which is connected to the rotating rectifier which produces d-c current; current from the rectifier is fed through the hollow shaft to energize the rotating generator field; the stationary generator armature delivers 480-v, 300-cycle, 3-phase current to the motor.

20 D-H FLOOR/CEILING-MOUNTED PUBLIC SPACE AIR HANDLERS

CREDITS: ARCHITECT: Charles F. McKirahan, Ft. Lauderdale, Florida. AIR CONDITIONING CONTRACTOR: Josueth Gonzalez, Quito, Ecuador. D-H INTERNATIONAL SALES REPRESENTATIVE: Climate Control International, Inc., Los Angeles

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**Average net paid circulation, Dec. 31, 1960 ABC Audit Report. Circulation includes: 12,601 dealer-contractors, distributor contractors, and service and installation contractors; 945 wholesalers; 5,099 manufacturers.*

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NLRB Secondary Boycott Rulings--

(Continued from Page 1, Col. 3)

sile base in the spring of 1960 was a secondary boycott, not a jurisdictional dispute. This case had to do with a hassle over prefabricated work.

In the Long Island case, the board overruled Trial Examiner Charles W. Schneider. He had recommended dismissal of the complaint on the premise that a complainant cannot use NLRB machinery to protect illegal practices that it is the purpose of the National Labor Relations Act to destroy.

The board found that Local 457 induced and encouraged employes of neutral employers at the Shelter Rock Tennis Club project to engage in a strike or a refusal to perform services and that the union's picketing of the project had the same calculated effect.

'Threatened, Coerced Restrained'

The board also found the Local 457's agent Mullen made threatening remarks to Shelter Rock's president in the presence of neutral employers working on the project, thereby threatening, coercing, and restraining them within the meaning of Sec. 8 (b) (4) (ii) of the act.

According to the board, objects of this conduct were to force or require:

(a) Shelter Rock and other employers working on the project to cease doing business with Bady, a subcontractor for plumbing work, and with each other;

(b) Customers, suppliers, and truckers of materials to and from neutral persons performing work at the Shelter Rock project to cease doing business with such neutral persons; and

(c) Bady to recognize or bargain with Local 457 as the representative of Bady's employes, although the local had never been certified as the representative of such employes.

By the foregoing, the board concluded that Local 457 violated Sec. 8 (b) (4) (i) and (ii) (B) of the act.

Trial Examiner Schneider had recommended that no finding of violation be made and no remedial order be issued because of a non-union clause in Bady's contract with Shelter Rock. He found no violation because "the project at which the respondent's action occurred constituted a primary situs at which the respondent could lawfully picket and induce action by employes and employers in connection with the controversy."

Board Disagreed with Schneider on 2 Points

The board disagreed with Schneider on both points. It said:

"We assume for the purpose of discussion that the non-union hiring clause in Bady's contract with Shelter Rock is unlawful under Section 8 (a) (3) and (1) of the act. Nevertheless we do not agree with the trial examiner that this illegal conduct on the part of the charging party excused illegal conduct by respondent . . .

"The trial examiner acknowledges that unclean hands are not a defense to allegations of unfair practices and that the commission of unfair labor practices does not privilege the victim to reply in kind.

"Nevertheless, the trial examiner finds that these salutary principles are inapplicable in this case because what is involved is Bady's effort to use the processes of the act to maintain practices in violation of it.

"The trial examiner apparently believes that if the board were to find respondent guilty of unfair labor practices and issue the usual remedial order, it would perpetuate the alleged illegal hiring practice contained in Bady's contract."

This, the board said, is to misapprehend the nature of any remedial order that might be issued.

"A remedial order in an 8 (b)(4)(B) case does not require adherence to terms of a contract; the board is not concerned with private or contract rights," the NLRB said.

"Such an order only restrains a union from engaging in certain conduct whose object is, in the words of the statute, to force or require any person to cease . . . doing business with any other person, or forcing . . . any other employer to recognize or bargain with a labor organization as the representative of his employes. . . .

"Doing business as used in the statute does not mean according to the contract terms, certainly not if the contract contains illegal provisions. The trial examiner is therefore in error in asserting that the requested remedial order would perpetuate the existing alleged illegal hiring practices."

The board also disagreed with Schneider's findings that no unfair labor practices were committed because Shelter Rock and Bady were allies, the construction site was a primary and not mixed situs, and the picketing therefore did not have to conform with the *Moore Drydock,* 92 NLRB 547 criteria.

The board viewed the case as a rather typical secondary boycott situation in the building trades, in which the union had a dispute with Bady over the employment of non-union plumbers.

Bady's employes declined to join the union and Bady refused to replace all or some of them with union plumbers, it was stated. The union then threatened, the board said, to have union craftsmen employed by neutral employers "pulled" from the job unless its demands were met.

"After Bady proved adamant in resisting the union's demands," an NLRB summary of the case said, "unionized employes of secondary employers simultaneously and suddenly walked off, shutting down the job. This work stoppage by employes of neutrals occurred before the start of any picketing.

"When the employer of Bady, Shelter Rock, agreed with the union to give unionized plumbers part of the plumbing work for which Bady had the contract, the union promised in return to remove the pickets. Shelter Rock and the union adhered to their agreement, the pickets were removed, and employes of neutral employers returned to work.

Said the board: "Thus respondent achieved its objective."

Although there was no direct evidence indicating that the union was responsible for the work stoppage, the board said circumstantial evidence pointed in that direction.

Yuma Case

In the Yuma case, Trial Examiner Myers found that Local 469's dispute was with Hansberger Refrigeration & Electric Co., that Hansberger had a facility which the union could picket without implicating neutral employers, but that, nevertheless, the union picketed a construction site quite some distance from Hansberger's premises.

As a result, Myers said, the employes of certain neutral employers were induced to stop work.

Myers further found that, although the union had adequate opportunity to appeal to Hansberger's employes by the ordinary methods traditionally resorted to by unions to organize workers, it completely abstained from using these methods.

"It is thus fair to conclude," Myers said, "that respondent's motive, at least in part, in picketing Hicks-Ponder Mfg. Co.'s jobsite, was to bring its dispute with Hansberger to the attention of the employes working on the Hicks' job so as to obtain their aid.

"This is especially true since all the employes of the neutral employers here involved refused to cross, or work behind, respondent's picket line."

Washington Case

Members of UA locals involved in the Washington missile base work stoppage were employed by Scott Co., a large mechanical contracting firm.

The trial examiner in the case said the locals, 598 and 44, "directed an appeal to all employes of Scott not to install pipe in the prefabricated tunnel sections being built by Scott under subcontract because the metal hangers in said tunnel sections were installed by employes of the Eaton Metal Products Co. . . ." The latter were not UA members.

Since sparks from welding could ignite asphalt waterproofing, channel iron supports were welded to steel plates by Eaton and preassembled at Salt Lake City and Denver. However, according to the trial examiner, Scott had agreed with the UA that the pipe hangers and pipe supports would be installed at the job site.

Ruling that the work stoppage by UA local members was a secondary boycott, the NLRB ordered that the stoppage be halted. If the stoppage had been ruled a jurisdictional matter, the board, under a recent ruling of the Supreme Court, would have had to decide the dispute.

When the NLRB filed a petition for an injunction, the locals ordered the men to return to work on the tunnel sections.

PHILHARMONIC HALL at Lincoln Center for the Performing Arts is using Permacel EZ-4719 duct sealant adhesive for all high velocity ductwork, it is reported by Permacel, New Brunswick, N. J. The contractor is Triangle Sheet Metal Works, New Hyde Park, N. Y. The adhesive "forms a tough, flexible seal which is air and water tight," the manufacturer said. "Once cured it will not flow under pressure or heat, but flexes with expansion and contraction of the duct.

"The adhesive bonds to both galvanized and aluminum ductwork. It has a temperature rating of -20°F to +200°," according to the announcement.

Full-Scale Living Effects 'Laboratory' Being Constructed by Emerson Electric

ST. LOUIS—Construction has been started for a full-scale Living Effects "laboratory" for Emerson Electric Mfg. Co. on the grounds of its headquarters at 8100 Florissant Ave. in St. Louis County.

When completed, the building will be used for testing and development work in residential electric heating, cooling, ventilating, and lighting products manufactured by the company's Builder Products Group, commercial lighting fixtures manufactured by Day-Brite Lighting Co., and for joint research projects with leading builders, architects, and electrical contractors throughout the country.

The building will provide an authentic home environment for developmental testing by offering conditions impossible to achieve in research laboratories currently maintained by the company, it was stated.

Products will be tested under both extreme and typical conditions, and in conjunction with a variety of materials not manufactured by Emerson Electric, such as insulation, floor, and ceiling coverings.

"The upper level will house 1,400 sq ft of living area, with a large deck for meetings or possible expansion," it was pointed out. "To permit maximum flexibility for future research, the roof the house will be suspended from steel 'bents,' which will allow all interior partitions to be moved easily, and simplify the application of various structural techniques.

"Also on this floor will be a room in which seasonal climatic conditions may be effected throughout the year. An area outside this room may be flooded with chilled air, so that heating systems may be tested during the summer months, and cooling systems in the winter. It will be built on a hillside.

The 1,300-sq ft lower level will open onto a large patio. A portion of this level will have 12-foot ceilings, required for the proper testing of commercial lighting fixtures.

"A full complement of recording instruments will be incorporated in the house to compile the necessary information on product performance. A power supply center will provide metered and regulated electricity."

The building is expected to be in operation this fall.

Homeyer Severs Ranco Connections, Plans Other Activities

CEDAR GROVE, N. J. — Arthur C. Homeyer is severing his connections with Ranco, Inc., for whom he served as manufacturer's sales agent for 25 years, to devote his time to personal business interests.

Among the projects in which Homeyer will be active are Delta-T, Inc., which is merchandising a line of thermostatic controlled hot water tank assemblies, and the "Konstant Hot," an automatic tea kettle; and H & H Thermostats, Inc., which makes a control mechanism for water coolers, and a set of control components for air induction units used in air conditioning systems.

Modine Elects McMahon Engineering Vice Pres.

RACINE, Wis.—The board of directors of Modine Mfg. Co. elected W. R. McMahon to the position of vice president, engineering.

W. McMahon

McMahon joined the Modine organization as an experimental engineer in 1936. In succeeding years, he held the positions of head of the experimental laboratory, Heating & Air Conditioning Div. sales engineer, assistant sales manager, chief engineer, executive engineer, and director of engineering and research.

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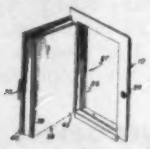
PATENTS *Week of April 11*

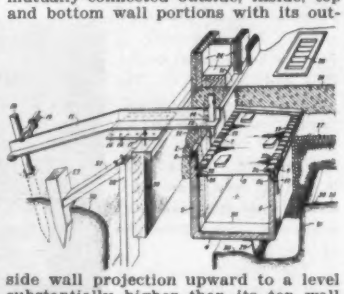
2,978,755. VAPOR PROOF COVER OR FREEZER DOOR ASSEMBLY. Robert L. Walker, New Lisbon, Wis.



In a device of the character described, a body member provided with an enlarged opening, a frame member mounted in the opening in said body member in fixed relation thereto, said body member including a wall member, said body member being hollow and having insulation therein, said wall member being shaped to include a first portion, a second portion arranged at right angles to said first portion, a third portion arranged angularly with respect to said second portion, a fourth portion arranged angularly with respect to said third portion, a fifth portion which is arranged in spaced parallel relation with respect to said fourth portion . . .

2,978,779. CONSTRUCTION AND INSTALLATION OF HEATING CONDUITS OF BUILDINGS. Richard Tatsch, 901 W. 6th St., Silver City, N. Mex.

1. Equipment for pouring concrete to form a floor slab and a circumscribing foundation wall of a building and simultaneously install a perimeter under-floor air conduit, the said equipment comprising an outside foundation wall formwork defining the upright outer surface of the foundation wall to be poured and comprising ground-engaging means for supporting it fixedly with the upper edge of its wall-defining surface at substantially the level of the floor surface of the slab to be poured; a combined air conduit and perimeter insulation structure having mutually-connected outside, inside, top and bottom wall portions with its out-

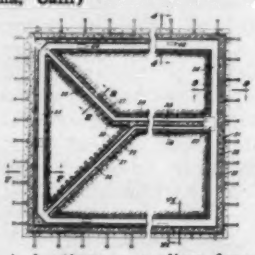


side wall projection upward to a level substantially higher than its top wall and having good thermal insulating properties . . .

2,978,797. TUBULAR FINNED METAL SECTIONS AND MANUFACTURE THEREOF. Anders Einar Ekelund, Vasteras, Sweden, assignor to Aktiebolaget Svenska Metallverken, Vasteras, Sweden, a limited joint-stock company of Sweden.

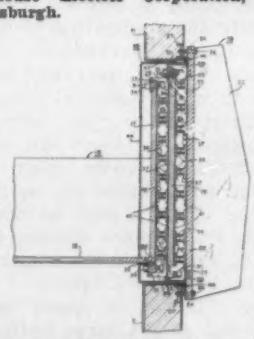
1. The method of making a finned metal tube suitable for heat exchanging purposes which comprises initially extruding a metal blank having a tubular core portion and a plurality of external longitudinally extending fins projecting substantially tangentially from said core portion, the configuration of the blank as extruded being such that the envelope of the external surface of the peripherally continuous core portion alone of the blank presents a ratchet-like configuration comprising a series of substantially flat tangential surfaces which at their radially inner edges coincide with the circle defining the outer surface of the wall of said tubular core portion . . .

2,978,840. BUILDING CONSTRUCTION AND AIR CONDUIT STRUCTURE THEREFOR. Richard Tatsch, Silver City, N. Mex. (212 N. Grandview, Covina, Calif)



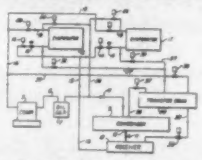
1. A heating or cooling forced-air conduit for perimeter installation against the inner surface of the foundation wall and the under surface of the floor of a building, the conduit comprising an upright outer side wall part formed of heat-insulating material, a bottom wall part extending inwardly, from the lower portion of the outside wall, an inner side wall part extending upwardly from the bottom wall, and a top wall part extending from the upper portion of the inner side wall to the outer side wall and joining the latter on a line spaced downwardly from the upper edge of the outer side wall . . .

2,978,875. PLURAL-STAGE THERMOELECTRIC HEAT PUMP. Robert S. Lackey, Pittsburgh, William L. Wright, Monroeville, and Jack D. Meess, Export, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh.



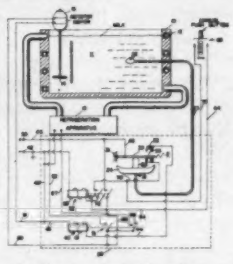
1. In a plural-stage, thermoelectric heat pump, the combination of a heat absorbing plate, an intermediate plate and a heat dissipating plate, said plates being of graduated face areas in the order named with the heat absorbing plate having the smallest area of the three, said plates being disposed in facing, parallel, spaced relationship, a first thermoelectric array disposed between said heat absorbing plate and said intermediate plate for pumping heat from the former to the latter, a second thermoelectric array disposed between said intermediate plate and said heat dissipating plate for pumping heat from the former to the latter, first means mechanically connecting said heat absorbing plate to said intermediate plate for compressing said first array between said last-named plates and for supporting said heat absorbing plate from said intermediate plate, and second means mechanically connecting said intermediate plate to said . . .

2,978,877. HOT GAS DEFROSTING SYSTEM WITH GRAVITY LIQUID RETURN FOR REFRIGERATION SYSTEMS. Joseph N. Long, Wauwatosa, Wis., assignor to The Vilter Manufacturing Company, Milwaukee, Wis.



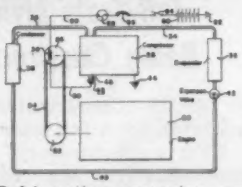
1. A refrigeration system comprising a compressor having a high pressure refrigerant line for passing refrigerant through a condenser and receiver and into an evaporator, and also having a suction line for returning evaporated refrigerant back to the compressor, a liquid transfer drum connected between said evaporator and said receiver for returning liquid refrigerant to said receiver, a hot gas line between the compressor and said evaporator, and temperature responsive electrical control means including a defrost timer and valves for regulating refrigerant flow in said system and adapted to close said pressure and suction lines and open said hot gas line to thereby permit hot gas to enter and defrost said evaporator . . .

2,978,878. CONTROL APPARATUS FOR LIQUID COOLER. Aaron I. Curtis, Plymouth Township, Hennepin County, and William J. Larsen, St. Louis Park, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn.



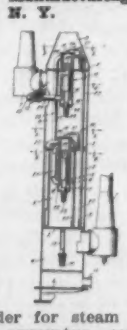
1. In control apparatus for controlling refrigeration apparatus and a circulation device of a milk storage installation automatically and providing normal selective control of the circulation device, switch means having a normally closed contact and a normally open contact, temperature response means adapted to be responsive to the temperature of the stored milk, means connecting said responsive means to said switch means so that when the temperature of the milk is above a predetermined value said normally open contact is closed . . .

2,978,879. REFRIGERATING APPARATUS. John H. Heidorn, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich.



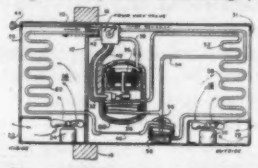
1. Refrigerating apparatus containing a refrigerant including a compressor having a suction inlet and a discharge outlet, a condenser and a flow controlling device and an evaporator connected in circuit between said outlet and inlet, drive means for said compressor, and means responsive to the combined effect of the temperature of the compressor and the refrigerant pressure within the compressor for preventing operation of said compressor.

2,978,880. STEAM VACUUM REFRIGERATION UNIT. Frederick D. Berkeley III, Rochester, N. Y., assignor to Graham Manufacturing Co., Inc., Great Neck, N. Y.



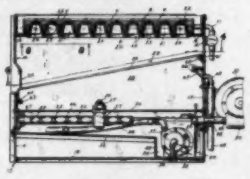
8. A header for steam vacuum refrigerating apparatus comprising a plurality of spaced upright walls, top and bottom plates secured to selected upright walls and co-operating therewith to form a feeder chamber and a bypass chamber, said walls being formed to provide communication at the bottom portion between said chambers, said walls having discharge openings at the top of said chambers, a liquid inlet connection with the lower end of said header, and a by-pass opening at the upper end of said header in communication with said by-pass chamber.

2,978,881. AIR CONDITICNING APPARATUS. Carl F. Alsing, Wilbraham, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa.



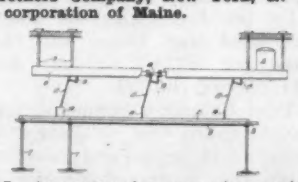
1. Air conditioning apparatus including a reversible, compression refrigeration system utilizing a volatile refrigerant for heating or cooling a conditioning medium and comprising: a cabinet provided interiorly with first and second compartments; a first heat exchanger disposed in said first compartment and means for supplying outside air thereto; a second heat exchanger disposed in said second compartment, and means for supplying the conditioning medium thereto; compression means for the volatile refrigerant disposed in said first compartment, and means surrounding said compression means providing heat insulation therefor; means for serially directing the refrigerant from said compression means through said heat exchangers, first through said first heat exchanger when cooling said conditioning medium or first through said second heat exchanger when heating said conditioning medium . . .

2,978,882. ICE CUBE MAKING MACHINE. Dwight L. Bollefer, 1906 Riverside Ave., Minneapolis 4, Minn.



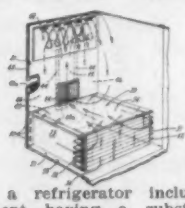
1. In a machine for making ice blocks, a row of inverted freezing cells having substantially closed top walls and open bottoms, refrigeration apparatus including an evaporator for refrigerating the wall surfaces of said cells to cool liquid received therein, a spray head having an upwardly directed discharge aperture in underlying spaced relation to said row of cells, pump means for forcing liquid upwardly through said spray head aperture, means mounting said head to direct said liquid through said aperture in a spray toward said row of cells in a direction generally perpendicular to the plane of the row of cells and for movements of said head longitudinally of said row of cells . . .

2,978,883. APPARATUS FOR CONVEYING PRODUCTS OVER A FROZEN SURFACE. Jan Evert Jessee, Oss, Netherlands, assignor to Lever Brothers Company, New York, N. Y., a corporation of Maine.



5. Apparatus for conveying perishable articles while preserving them from deterioration which comprises a trough for containing a liquid to be frozen, means for freezing a liquid in said trough, a scraper-conveyor mounted above the trough and having downwardly depending blades pivotally mounted and spring loaded so as to press down on the surface of the frozen liquid while sweeping the articles along said surface.

2,978,894. REFRIGERATION APPARATUS. Nicholas J. D'Alcandro, Walter G. Mocay, and Elmer W. Zearfoss, Jr., Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa.



10. In a refrigerator including a compartment having a substantially sealed chamber disposed in a lower portion thereof a duct system disposed in fluid flow communication with said compartment, said duct system including first conduit means through which air moves upwardly, second conduct means communicating with said first conduit means and through which air moves downwardly, third conduit means communicating with a portion of said second conduit means and disposed adjacent, and in high heat exchange relation with . . .

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Excellent opportunity in product design and development. Candidate must be graduate engineer with a minimum of six years' experience in the design of small refrigeration circuits up to 5-H.P. Position requires planning and conducting projects of major scope with a minimum of supervision and coordinating work of other engineers and technicians assigned to the project. Liberal insurance, vacation and other fringe benefits. Please submit resume and salary requirements to:

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Amer. Rad. & Std. San. Corp.
Research and Engineering Department
Plumbing & Heating Division
834 E. Broadway
Louisville 4, Kentucky

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FAMILY-OWNED distributorship in ideal area, looking for currently employed office manager with heating and air conditioning wholesale background. Sales ability a desirable extra, but not mandatory. All replies kept in strict confidence, BOX A6814, Air Conditioning, Heating & Refrigeration News.

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FIBERGLASS DUCT kits wanted; of type originally used for residential air conditioning by Vornado, Gibson, etc. Consisting of square fiberglass ducts, ceiling diffusers, return air grilles, etc. Write complete breakdown of inventory available, and price wanted for immediate sale to: RYAN COMFORTIZING INDUSTRIES, INC., 493 Hempstead Turnpike, West Hempstead, New York.

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CHRYSLER AIRTEMP compressor model 3HC, 220 volts, 3-phase Chrysler part #1175858. New in original crate $175.00. One SC two hundred A 3 h.p., two twenty volt, 3-phase ice flaker used ninety days $675. Manufactured by Liquid Freeze, Oakland, Calif., f.o.b. Galion. AJAX OF GALION, Phone HOward 2-8881, Galion, Ohio.

COMPACT BROWNIE freezers—most compact of soft ice cream units, produces smoothest product. We want more refrigeration dealers to sell this fabulous, efficient, inexpensive, stainless steel equipment N.S.F. approved. Write today. THE BROWN MFG. CO., 812 Ohio River Blvd., Avalon, Pittsburgh 2, Pa.

NOTICE: DISTRIBUTORS, dealers, servicemen, users refrigeration equipment—repair parts available all models Baker ammonia and Freon compressors. Also models 6B and F6B ammonia compressors. We are exclusive Baker export sales office. Manufacturers' export agents refrigeration, air conditioning and allied equipment. THE KEISER COMPANY, 1555 W. 79th St., Chicago 20, Illinois.

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ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

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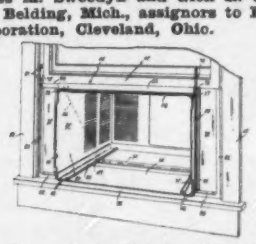
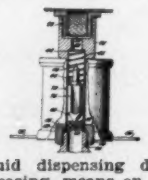
2,978,973. WINDOW AIR CONDITIONER MOUNTING ASSEMBLIES. James M. Sweedyk and Glen L. Gleason, Belding, Mich., assignors to Hupp Corporation, Cleveland, Ohio.



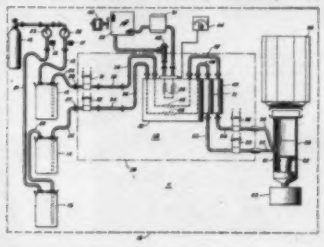
1. An apparatus for mounting an air conditioner having a shell-like housing enclosing a condenser, a compressor and an evaporator and adapted to be positioned in the opening of a sliding sash window comprising a hollow tubular frame member extending across the top of said housing at said window opening forwardly of the window sash, bracket members slidably mounted within said tubular frame member and projecting from the opposite ends of said tubular frame member, cooperating means on said tubular member and said bracket members to prevent rotation of said bracket members with respect to said hollow tubular frame member . . .

2,979,231. SOLENOID VALVE AND DISPENSER. Jack Witherspoon, Jr., Knoxville, Tenn., assignor to Robertshaw-Fulton Controls Company, Richmond, Va.



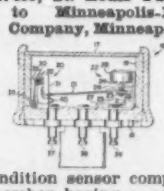
1. A fluid dispensing device comprising a casing, means on said casing for securing a fluid container thereto, a solenoid disposed around said casing, an armature movable between a plurality of positions in said casing, puncturing means on said armature, a valve seat in said casing, means positioned at the lower end of said armature forming a valve member, said armature moving to one of said plurality of positions in response to initial inrush of current in said solenoid to puncture the container and then receding to another of said plurality of positions to permit fluid flow through said casing, and said armature being movable to still another of said plurality of positions in response to cessation of current flow in said solenoid to restrain fluid flow . . .

2,979,232. BEVERAGE DISPENSING SYSTEM. Leonard J. Wood, Rockaway, N. J. (135 Patricia Place, Clifton, N. J.



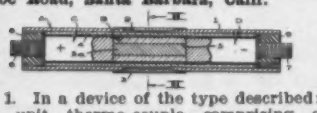
1. A beverage dispensing system comprising a carbonated beverage storage tank, a high pressure source for maintaining the beverage in said tank under pressure, valve means for controlling the flow of beverage from said storage tank, pressure and turbulence reducing means having a restricted beverage passageway connected to the outlet side of said valve means, beverage cooling means . . .

2,979,585. CONDITION SENSOR. John F. Werr, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn.



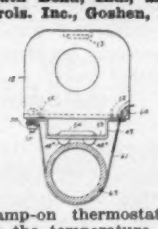
1. A condition sensor comprising: a support member having a pair of extending arms, each of which is provided with an open notch, a bimetal condition sensing member having a movable switch member mounted at one end thereof and having a shaft rigidly mounted at the other end thereof, a spring member mounted in fixed relation to said support member and having a free end extending in the vicinity of the axis defined by the notches in said pair of extending arms such that upon said shaft being positioned in said notches . . .

2,979,551. THERMOELECTRIC GENERATOR. Herschel G. Pack, 4308 Modoc Road, Santa Barbara, Calif.



1. In a device of the type described: a unit thermo-couple comprising a metal cylinder; a heat transfer element at the center of the cylinder; a positive current-producing element in the cylinder and contacting with the heat transfer element; a negative current-producing element in the cylinder and contacting with the heat transfer element; a current insulating sleeve separating the central heat transfer element and the positive and negative current-producing elements from the metal cylinder; rubber plugs mounted in the ends of the cylinder and adjacent ot the positive and negative current-producing elements; and screws mounted in the plugs and being adjustable for contacting with the positive and negative current-producing elements for holding them in contact with the heat transfer element; said plugs sealing the cylinder ends to prevent the entrance of air into the cylinder and thereby prevent any damage to the contacting surfaces among the elements due to oxidation caused by air.

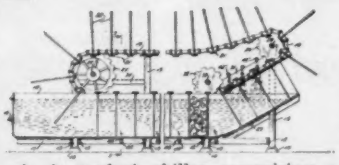
2,979,586. CLAMP-ON TEMPERATURE RESPONSIVE DEVICE. Louis J. Siri, South Bend, Ind., assignor to Penn Controls, Inc., Goshen, Ind.



1. A clamp-on thermostat adapted to react to the temperature of a pipe or tube through which a fluid flows, said thermostat comprising a generally rectangular case, a housing supported within said case, a switch mounted within said housing and disposed adjacent the transverse center-line of said case, a fluid filled power element mounted within said housing, motion transmission means including a pivotally supported level engaged by said power element and said switch for operation of the switch in response to expansion and contraction of said power element, a generally rectangular base plate having parallel, longitudinal ribs formed therein . . .

Week of April 18

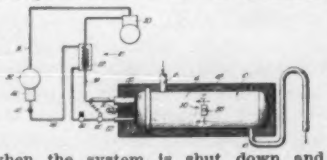
2,979,914. PRODUCT CHILLER. Milton W. Garland, Waynesboro, Pa., assignor to Frick Company, Waynesboro, Pa.



4. A product chiller comprising a relatively long narrow flume for the passage of water at a desired level therewithin and, an endless conveyor mounted with its lower run adjacent to the top of the flume and above the water level and an upper run above the lower run, said conveyor having a plurality of spaced rakes mounted transversely of the flume and of a size and configuration corresponding substantially to the cross section of the flume in order that the rakes carried on the lower run may extend into the water in the flume and thereby form a series of compartments therewithin for the reception and movement of the product to be chilled, means for introducing water into the product discharge end of the flume, and means for producing localized agitation of water within the flume, said means comprising passages providing communication with the lower portion of the flume.

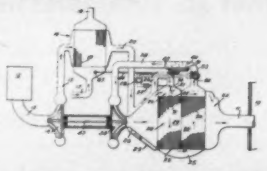
2,979,915. OFF SEASON LIQUID CHILLER CONTROL DEVICE. Donald B. Gardner, Mount Prospect, Ill., assignor to Bell & Gossett Company, Morton Grove, Ill.

1. In apparatus of the class described, the combination of a chiller tank through which a liquid is adapted to be circulated, a refrigerating system adapted to cool said liquid including a compressor, a condenser, and an evaporator connected in series in a closed loop with a vaporizable refrigerant therein and with the evaporator being located in said chiller tank, and heating means for maintaining the temperature of the evaporator sufficiently above that of the condenser



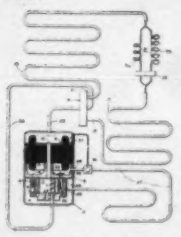
when the system is shut down and the apparatus is completely out of use for long periods of time whereby condensation of refrigerant does not take place in the evaporator while the system is shut down . . .

2,979,916. HUMIDITY CONTROL SYSTEM. John L. Mason, Los Angeles, Calif., assignor to The Garrett Corp., Los Angeles, Calif.



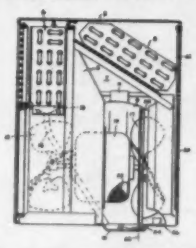
19. In an air conditioning system in combination: conditioning means for conditioning air including means for varying the temperature thereof, means for conveying air from the conditioning means to an enclosure, and means responsive to the pressure and temperature of air passing to the enclosure controlling the temperature varying means of said conditioning means prior to the cooling expansion of said air whereby to maintain a constant humidity . . .

2,979,917. COOLING ARRANGEMENT FOR HERMETICALLY SEALED REFRIGERANT COMPRESSOR. George L. Meagher, Anchorage, Ky., assignor to General Electric Co., a corporation of New York.



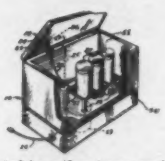
1. In a reversible refrigeration system, the combination comprising a hermetically sealed casing for containing a high pressure refrigerant gas, a compressor and a compressor motor mounted in said casing, a reversing valve, a suction line for delivering low pressure refrigerant gas from said reversing valve to said compressor, a high pressure line for delivering high pressure refrigerant gas from said casing to said reversing valve, a discharge chamber directly connected to the outlet of said compressor . . .

2,979,918. ROOM AIR CONDITIONER CONDENSATE DISPOSAL ARRANGEMENT. Leonard W. Atchison, Louisville, Ky., assignor to General Electric Co., a corporation of New York.



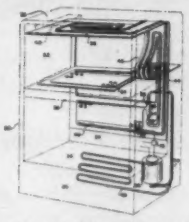
1. In an air conditioner of the type adapted to be utilized throughout the year for conditioning the air within an enclosure, the combination comprising a heat exchange apparatus including at least one fan mounted in said air conditioner for circulating a stream of outside air through said apparatus, a sump for collecting condensate water from said apparatus, said sump being positioned beneath said fan wherein said sump is exposed to outdoor temperatures which in the winter are likely to cause condensate water to freeze within said sump . . .

2,979,920. APPARATUS FOR SEMI-FREEZING BEVERAGES. William O. Peaks, 9146 Cave Creek Rd., Phoenix, Ariz.



1. A portable vibratory unit for deposit in a commercial refrigerator compartment, said unit including a platform for supporting a liquid in a container above the floor of said compartment, a vibrator mounted on said unit to vibrate said platform to agitate said container and liquid, means for circulating the air within said compartment, said platform having apertures for the passage of air about said container during the semifreezing of said liquid.

2,979,922. REFRIGERATING APPARATUS. John T. De Witte and Clifford H. Wurtz, Dayton, Ohio, assignors to General Motors Corp., Detroit, Mich.



1. A household refrigerator having insulating walls enclosing two separate compartments to be cooled with an insulating wall separating the compartments, a single one-piece plate type evaporator for cooling both compartments, said evaporator having a first generally plane and generally rectangular plate section constituting the central portion and a second generally plane and generally rectangular plate section . . .

(To Be Continued)

From the Files of the News

25 years ago . . .

Emergency installation of two portable air conditioners in Detroit's Receiving hospital offered relief to heat prostration cases who were victims of the recent heat wave (during which 50 people were fatally afflicted!). The hospital director declared that while expense prohibited further purchases, "unit conditioners would be a definite help, especially in operating rooms . . . hottest rooms in the building." . . . After 39 deaths from heat prostration in Minneapolis, plans are being drawn to air condition the Minneapolis General hospital, under orders from the public welfare board.

George Taubeneck reports from his trip around the world that in Bombay he met "a real live Indian prince—the Maharajah of Porvandur—who is not only keenly interested, but well-informed on air conditioning." Taubeneck also suggested to the Westinghouse and General Electric Bombay representatives, who are highly interested in promoting railway air conditioning in India, that they air condition the first class compartments first for nominal cost.

Air conditioning is now a highlight of the Chicago Rotary offices; this first Rotary Club ever established is setting another good example for the hundreds of service clubs all over the country. . . . Air conditioning is a feature of the 100 new double-deck buses recently built by the Chicago Motor Coach Co. The systems furnish 10 cfm of fresh air for each of the 72 passengers.

York Corp. has developed a new 4-ft long bronze flexible refrigerant charging connection for the use of service, installation, and operating engineers. . . . The NEWS editorialized on highlights of the Coolerator hearings, on which the NEWS' editors have reported "from the scene" the case of the FTC vs. Coolerator's questionable ice box advertising practices.

In the "Service Methods" column a reader asks: "will a pressure control work well with an automatic expansion valve." The answer, from the Master Service Manual published by the NEWS. . . . "The operating back pressure in the low side of a system using the automatic expansion valve remains constant during the entire cycle . . . this fact precludes the possibility of employing the low pressure control in a system using the automatic expansion valve as a refrigerant control."

10 years ago . . .

Under the terms of an emergency proclamation, no air conditioning or refrigeration units using either public or private water can be operated in flooded Kansas City, with the result that many businesses cannot operate at present. . . . "Inside Dope" predicted that the U.S.A. wouldn't be at war with Russia for 10 years.

Frick air conditioning is the outstanding feature of a St. Thomas, Pa. fruit storage plant, the system providing a "remarkably high relative humidity" necessary for preserving apples and peaches. . . . A remote type air conditioner installed flush in the shelving near the ceiling is solving the problem of cooling a Louisiana "basementless" shoe store. . . . Holland Furnace Co. lost its license to operate in Wayne and Oakland Counties in Michigan for a period of two months when found guilty on charges of unfair business practices.

Belmont Radio Corp. urged dealers handling its TV sets to get out and push sales of air conditioners, a trade advertisement advising "You have the names of all the families you've sold TV sets to . . . now sell these same families air conditioning units (makes home comfortable, cool, makes summer TV-viewing fun").

Coefficients of performance (C.O.P.) as high as 20.8 at the average winter temperature of 49°F and a C.O.P. of 10.2 at 30° have been observed for one of the world's largest heat pump installations—that of the plant and office where the Portland, Ore. "Oregonian" is published.

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12th ARI Exposition Progress Report--

(Continued from Page 1, Col. 3)
national conventions or special meetings in Los Angeles during the period of the Exposition include Air Conditioning & Refrigeration Wholesalers; National Warm Air Heating & Air Conditioning Assn.; North American Heating & Air Conditioning Wholesalers Assn.; Refrigeration & Air Conditioning contractors Assn.; and Refrigeration Service Engineers Society.

Technical, Management Conference Planned

Also a special conference on technical and management subjects is being developed by the Western Air Conditioning Industries Assn., which will act as host for the event. Preliminary details for these conference sessions, as announced by Athur J. Hess, past president of ASHRAE and Conference Chairmen, includes sessions, starting Sunday afternoon, Feb. 11, and continuing with morning and afternoon sessions through Wednesday, on a wide variety of subjects. Among them:

Session for Service Engineers

A technical session for service engineers including sessions on drying methods for refrigeration systems, water treatment, and insulation of piping and systems. Panel session on air conditioning load calculations, covering new forms of calculations, problems in existing buildings, sun loads and orientation, lighting loads.

Session on Business Administration, including discussions on taxes, credit, and salesmanship. Special session for Young Engineers — equipment vibration control, selection of belt drives, motor selection. Symposium for designers—heat pumps vs. absorption systems.

Special applications — hypothermia (use of refrigeration in operations), airborne bacteria control, school house air conditioning. High temperature heating panel, discussion to embrace pumps, boilers, control, piping design.

Inter-Industry Relations

Panel discussion on Inter-Industry Relations—direct selling by manufacturers and representatives, free engineering by contractors, manufacturing and competitive sales by contractors, loose use of "or equal" by engineers, use of free engineering by engineers.

Panel discussion on Bid Depositories. Session on High Velocity Air Conditioning, embracing discussion on ductwork, attenuating boxes, conduit systems, and modular conduction. Industrial and other special applications. Field of cryogenics; defrosting methods, thermoelectric refrigeration.

Social Program

The social program for "Air Conditioning and Refrigeration Week" will also be a joint enterprise, with a committee comprised of representatives of the various participating groups working out details through Thom Muir, executive vice president of ARW, as coordinator.

All social events, as well as the conference programs, will be held at the Biltmore Hotel, according to the present plans. However, both the Biltmore and the Statler hotels will serve as Exposition headquarters. The social program will open with a President's Reception late Sunday afternoon, Feb. 11, with the presidents of each association and their wives acting as hosts. Other events in this program include an "Early Birds" breakfast on Monday morning, serving as a kickoff for the Exposition and for the "Week" activities; an "Air Conditioning and Refrigeration Round-Up" in Western style with dancing and chuck wagon refreshments on Tuesday night; and a "Mardi Gras" night on Wednesday, starting at 6:30 p.m. and continuing through to midnight, with a floor show.

Special plans are also being developed for those who want to combine a trip to the Exposition and Conference with a winter vacation. Arrangements are being made to provide special assistance to those who want to visit Disneyland, Las Vegas, and some of the other special attractions of the Far West.

Continental Air Filter Names Spokane Sales Rep

LOUISVILLE, Ky. — Continental Air Filters, Inc., here has appointed Climate Control Co. of Spokane, Wash., as sales representative in that area for its complete line of automatic self-cleaning, renewable media (automatic and manual), and unit (viscous and dry type) filters.

So. Calif. Joint Training Program--

(Continued from Page 1, Col. 5)
certify the highest number of journeymen in training of any area in the nation;

4. Developed the largest number of instruction classes in air conditioning and refrigeration techniques offered anywhere in the United States;

5. Achieved recognition for men that they are important members of an important industry;

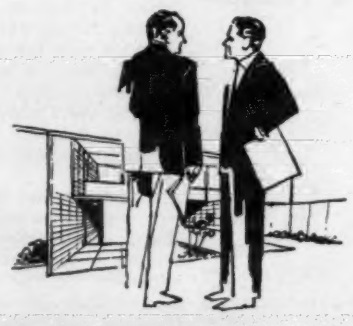
6. Increased total man hours worked by approximately 20%; and

7. Established refrigeration and air conditioning industry as an important segment of the construction and commercial economy of the Southern California area.

Represented on the panel were Jack Carney, of the chapter's board; Harry Bowe, training coordinator of the JJATC program; Ken McNeill, of McNeill & McCleery advertising agency in charge of the group's CRAC advertising program; Henry Ely, executive secretary of the local RACCA chapter; Gene Ballard, business manager of the Refrigeration Fitters branch local; and Al Hanson, vice president of Southern California RACCA and who serves as chairman of the JJATC.

Hanson, who as chairman of the association meeting concluded the panel presentation, told the contractors in attendance that during 1961-62 the journeymen instructive program would place even greater emphasis on training benefits while still continuing to maintain the high standards of quality developed by the industry.

2 to 10 Tons Capacity



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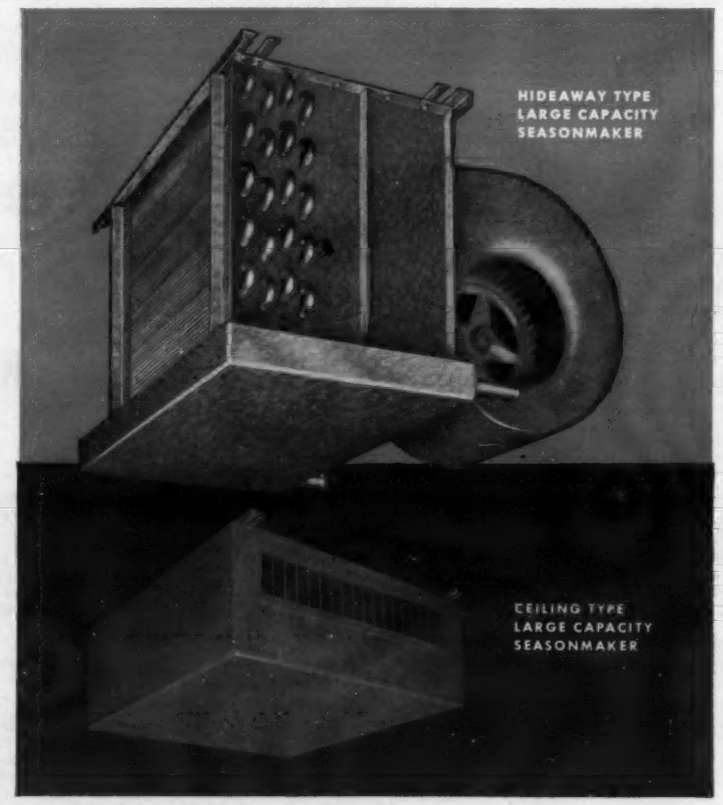

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